

Executive Summary Conditional Use Authorization

HEARING DATE: JULY 28, 2011 (CONTINUED FROM MAY 26, 2011)

Date:	July 21, 2011
Case No.:	2010.0987C
Project Address:	2055 Lombard Street
Current Zoning:	P (Public) District
	40-X Height and Bulk District
Block/Lot:	0509/009
Project Sponsor:	Amy Million
	KDI for AT&T Mobility
	855 Folsom Street, #106
	San Francisco, CA 94108
Staff Contact:	Sara Vellve – (415) 558 - 6263
	sara.vellve@sfgov.org
Recommendation:	Approval with Conditions

1650 Mission St. Suite 400 San Francisco, CA 94103-2479

Reception: 415.558.6378

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Planning Information: 415.558.6377

PROJECT DESCRIPTION

AT&T Mobility proposes to install nine panel antennas, one GPS antenna, and associated equipment cabinets as part of their wireless transmission network. According to the Wireless Telecommunications Services (WTS) Siting Guidelines, the property is a Location Preference 1 (Publicly-used structure) as the site is developed with a public parking garage and post office. The nine panel antennas, grouped into three sectors of three antennas each, will be constructed above an existing elevator penthouse at the building's northwest corner to a height of approximately 60 feet from grade. In order to improve the visual quality of the site, all antennas will be encased within one contiguous screen of synthetic material that is RF (Radio Frequency) transparent, which allows transmission to occur even though the antennas are obscured. The maximum dimension for all the proposed antennas is approximately 4' - 3'' tall, by 11'' wide by 5'' thick. The proposed WTS site also includes the installation of the associated mechanical equipment which will be located on the top floor of the garage and screened from view.

SITE DESCRIPTION AND PRESENT USE

The subject site is zoned P (Public) which is described in the Planning Code as containing a use which provides public services to the community, including civic structures such as museums, post offices, administrative offices of government agencies, public libraries, police stations, transportation facilities, utility installations, including Internet Services Exchange, and wireless transmission facilities The approximately 20,000 square foot site is developed as a four-story public parking garage with ground floor commercial, which is occupied by a United States Postal Service store. The subject lot is a through lot with Lombard Street on the north frontage and Moulton Street on the south frontage. The building is

located mid-block between Fillmore Street to the west and Webster Street to the east. The site is owned by the City and County of San Francisco. The subject structure was constructed in approximately 1987.

SURROUNDING PROPERTIES AND NEIGHBORHOOD

Both adjacent lots are zoned NC-3 (Moderate - Scale Neighborhood Commercial District) and contain a tourist hotel (Chelsea Motor Inn) to the west and commercial real estate company. The Tule Elk Park Child Development Center (operated by the San Francisco Unified School District) is located to the east on Webster Street between Moulton Avenue and Greenwich Street – approximately ½ block southeast of the subject site. The surrounding neighborhood generally consists of commercial, mixed use and residential buildings on a broad range of lot sizes.

ENVIRONMENTAL REVIEW

The project is exempt from the California Environmental Quality Act ("CEQA") as a Class 3 categorical exemption.

ТҮРЕ	REQUIRED PERIOD	REQUIRED NOTICE DATE	ACTUAL NOTICE DATE	ACTUAL PERIOD
Classified News Ad	20 days	May 6, 2011	May 6, 2011	20 days
Posted Notice	20 days	May 6, 2011	May 6, 2011	20 days
Mailed Notice	10 days	May 16, 2011	May 5, 2011	15 days

HEARING NOTIFICATION

PUBLIC COMMENT

 As of July 12, 2011, the Department has received public comment in opposition and in support of the proposal. Those in opposition to the following concerns: health-related impacts of the proposal; creation of an antenna "farm"; property values/view obstruction; methodology of establishing the need for the site; 27 "disk" attachments. Those in support of the proposal wish to have improved AT&T service in the neighborhood.

ISSUES AND OTHER CONSIDERATIONS

- In response to neighborhood opposition of the proposal, a second community meeting was held on Tuesday, July 12, 2011.
- The Project will utilize an existing elevator penthouse. All antennas will be concealed by RF transparent screening to match the existing building color.
- The project is a Location Preference 1 (Publicly-used structure), a preferred location.
- Health and safety aspects of all wireless projects are reviewed by the Department of Public Health and the Department of Building Inspection.
- The project is exempt from the California Environmental Quality Act ("CEQA") as a Class 3 categorical exemption.
- A Five Year Plan with approximate longitudinal and latitudinal coordinates of proposed locations, including the subject site, was submitted.
- All required public notifications were conducted in compliance with the City's code and policies.

- The Project will improve indoor wireless coverage to areas that currently receive poor coverage.
- The Project is located in a P (Public) District and requires a General Plan Referral. The proposal
 was found to be in compliance with the General Plan as demonstrated in the Section 303
 Findings of the project Motion.

REQUIRED COMMISSION ACTION

In order for the project to proceed, the Commission must grant Conditional Use authorization pursuant to Planning Code Sections 234.2(a) and 303 to allow the installation of wireless facilities.

BASIS FOR RECOMMENDATION

The Department believes this project is necessary and/or desirable under Section 303 of the Planning Code for the following reasons:

- The project complies with the applicable requirements of the Planning Code.
- The project is consistent with the objectives and policies of the General Plan.
- The Project is consistent with the 1996 WTS Facilities Siting Guidelines, Planning Commission Resolution No. 14182.
- The project site is a Location Preference 1, a preferred location, according to the Wireless Telecommunications Services (WTS) Siting Guidelines.
- The project will improve coverage for an area where there is currently poor indoor cell phone coverage.

RECOMMENDATION: Approval with Conditions



Exhibits above marked with an "X" are included in this packet ______ Planner's Initials

 $G: \verb|DOCUMENTS\verb|CONDITIONAL USES\verb|2010.0987CR - 2055 Lombard, AT\&T\verb|Executive Summary.doc||$



SAN FRANCISCO PLANNING DEPARTMENT

Subject to: (Select only if applicable)

- □ Affordable Housing (Sec. 415)
- □ Jobs Housing Linkage Program (Sec. 413)
- Downtown Park Fee (Sec. 412)
- □ First Source Hiring (Admin. Code)
- □ Child Care Requirement (Sec. 414)
- Other

Planning Commission Motion

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Staff Contact:	Sara Vellve – (415) 558 - 6263
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Recommendation:	Approval with Conditions

ADOPTING FINDINGS RELATING TO THE APPROVAL OF A CONDITIONAL USE AUTHORIZATION UNDER PLANNING CODE SECTIONS 234.2(a) AND 303 TO INSTALL A WIRELESS TELECOMMUNICATIONS FACILITY CONSISTING OF NINE PANEL ANTENNAS AND RELATED EQUIPMENT ON AN EXISTING ELEVATOR PENTHOUSE ON THE ROOF OF A FOUR-STORY PUBLICALLY USED MIXED-USE STRUCTURE (PARKING GARAGE & POST OFFICE) AS PART OF AT&T'S WIRELESS TELECOMMUNICATIONS NETWORK WITHIN A P (PUBLIC) ZONING DISTRICT, AND A 40-X HEIGHT AND BULK DISTRICT.

PREAMBLE

On November 2, 2010, AT&T Mobility (hereinafter "Project Sponsor"), made an application (hereinafter "application"), for Conditional Use Authorization on the property at 2055 Lombard Street Lot 009 in Assessor's Block 0509, (hereinafter "project site") to install a wireless telecommunications facility consisting of nine panel antennas on an existing elevator penthouse and related equipment on the roof on an existing four-story public parking garage and post office as part of AT&T's wireless telecommunications network within a P (Public) Zoning District, and a 40-X Height and Bulk District.

The project is exempt from the California Environmental Quality Act ("CEQA") as a Class 3 categorical exemption. The Commission has reviewed and concurs with said determination. The

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Planning Information: 415.558.6377 categorical exemption and all pertinent documents may be found in the files of the Planning Department (hereinafter "Department"), as the custodian of records, at 1650 Mission Street, San Francisco.

On July 28, 2011, the San Francisco Commission (hereinafter "Commission") conducted a duly noticed public hearing at a regularly scheduled meeting on the application for a Conditional Use authorization.

The Commission has heard and considered the testimony presented to it at the public hearing and has further considered written materials and oral testimony presented on behalf of the applicant, department staff, and other interested parties.

MOVED, that the Commission hereby authorizes the Conditional Use in Application No. 2010.0987C, subject to the conditions contained in "EXHIBIT A" of this motion, based on the following findings:

FINDINGS

Having reviewed the materials identified in the preamble above, and having heard all testimony and arguments, this Commission finds, concludes, and determines as follows:

- 1. The above recitals are accurate and constitute findings of this Commission.
- 2. Site Description and Present Use. The subject site is zoned P (Public) which is described in the Planning Code as containing a use which provides public services to the community, including civic structures such as museums, post offices, administrative offices of government agencies, public libraries, police stations, transportation facilities, utility installations, including Internet Services Exchange, and wireless transmission facilities The approximately 20,000 square foot site is developed as a four-story public parking garage with ground floor commercial, which is occupied by a United States Postal Service store. The subject lot is a through lot with Lombard Street on the north frontage and Moulton Street on the south frontage. The building is located mid-block between Fillmore Street to the west and Webster Street to the east. The site is owned by the City and County of San Francisco. The subject structure was constructed in approximately 1987.
- 3. Surrounding Properties and Neighborhood. Adjacent lots on either side of the subject lot are zoned NC-3 (Moderate Scale Neighborhood Commercial District) and contain a tourist hotel (Chelsea Motor Inn) and commercial real estate company. The Tule Elk Park Child Development Center (operated by the San Francisco Unified School District) is located on Webster Street between Moulton Avenue and Greenwich Street approximately ½ block southeast of the subject site. The surrounding neighborhood generally consists of commercial, mixed use and residential buildings on a broad range of lot sizes.

- 4. **Project Description.** AT&T Mobility proposes to install nine panel antennas, one GPS antenna, and associated equipment cabinets as part of their wireless transmission network. According to the *Wireless Telecommunications Services (WTS) Siting Guidelines*, the property is a Location Preference 1 (Publicly-used structure) as the site is developed with a public parking garage and post office. The nine panel antennas, grouped into three sectors of three antennas each, will be constructed above an existing elevator penthouse at the building's northwest corner to a height of approximately 60 feet from grade. In order to improve the visual quality of the site, all antennas will be encased within one contiguous screen of synthetic material that is RF (Radio Frequency) Transparent, which allows transmission to occur even though the antennas are obscured. The maximum dimension for all the proposed antennas is approximately 4' 3'' tall, by 11'' wide by 5'' deep. The proposed WTS site also includes the installation of the associated mechanical equipment which will be located on the top floor of the garage and screened from view.
- 5. **Past History and Actions.** The Planning Commission established guidelines for the installation of wireless telecommunications facilities in 1996 (*"Guidelines"*). These *Guidelines* set forth the land use policies and practices that guide the installation and approval of wireless facilities throughout San Francisco. A large portion of the *Guidelines* was dedicated to establishing location preferences for these installations. The Board of Supervisors, in Resolution No. 635-96, provided input as to where wireless facilities should be located within San Francisco. The *Guidelines* were updated by the Commission in 2003, requiring community outreach, notification, and detailed information about the facilities to be installed.¹

Section 8.1 of the *Guidelines* outlines Location Preferences for wireless facilities. There are five primary areas were the installation of wireless facilities should be located:

- 1. Publicly-used Structures: such facilities as fire stations, utility structures, community facilities, and other public structures;
- 2. Co-Location Site: encourages installation of facilities on buildings that already have wireless installations;
- 3. Industrial or Commercial Structures: buildings such as warehouses, factories, garages, service stations;
- 4. Industrial or Commercial Structures: buildings such as supermarkets, retail stores, banks; and
- 5. Mixed Use Buildings in High Density Districts: buildings such as housing above commercial or other non-residential space.

Before the Planning Commission can review an application to install a wireless facility, the project sponsor must submit a five-year facilities plan, which must be updated biannually, an emissions report and approval by the Department of Public Health,

¹ PC Resolution 16539, passed March 13, 2003.

Section 106 Declaration of Intent, a submittal checklist and details about the facilities to be installed.

Under Section 704(B)(iv) of the 1996 Federal Telecommunications Act, local jurisdictions cannot deny wireless facilities based on Radio Frequency (RF) radiation emissions so long as such facilities comply with the FCC's regulations concerning such emissions.

On July 28, 2011, the Commission conducted a duly noticed public hearing at a regularly scheduled meeting on the application for a Conditional Use authorization pursuant to Planning Code Sections 234.2(a) and 303 to install a wireless telecommunications facility consisting of nine panel antennas to be located above an existing elevator penthouse and related equipment on the roof of an existing four-story parking garage and ground-floor post office as part of AT&T's wireless telecommunications network.

- 6. **Location Preference.** The *WTS Facilities Siting Guidelines* identify different types of buildings for the siting of wireless telecommunications facilities. Under the *Guidelines*, the Project is a Location Preference Number 1, as it is a preferred location for a publicly-used structure
- 7. **Radio Waves Range.** The Project Sponsor has stated that the proposed wireless network will transmit calls by radio waves operating in the 700 2100 Megahertz (MHZ) bands, which is regulated by the Federal Communications Commission (FCC) and which must comply with the FCC-adopted health and safety standards for electromagnetic radiation and radio frequency radiation.
- 8. **Radiofrequency (RF) Emissions:** The project sponsor retained Hammett & Edison, Inc., a radio engineering consulting firm, to prepare a report describing the expected RF emissions from the proposed facility. Pursuant to the *Guidelines*, the Department of Public Health reviewed the report and determined that the proposed facility complies with the standards set forth in the *Guidelines*.
- 9. Department of Public Health Review and Approval. The proposed project was referred to the Department of Public Health (DPH) for emissions exposure analysis. Existing RF levels at ground level were around 1% of the FCC public exposure limit. There were observed similar antennas operated by T-Mobile within 100 feet of this site. AT&T proposes to install nine new antennas. The antennas will be mounted at a height of approximately 60 feet above the ground. The estimated ambient RF field from the proposed AT&T transmitters at ground level is calculated to be 0.0095 mW/sq cm, which is 1.2% of the FCC public exposure limit. The three dimensional perimeter of RF levels equal to the public exposure limit extends 53 feet and does not reach the top floor of the garage or any publicly accessible areas. Warning signs must be posted at the antennas and roof access points in English, Spanish, and Chinese. Workers should not have access to within eighteen feet of the front of the antennas while in operation.

- 10. **Maintenance Schedule**. The proposed facility would operate without on-site staff but with a two-person maintenance crew visiting the property approximately once a month and on an as-needed basis to service and monitor the facility.
- 11. **Community Outreach.** Per the *Guidelines*, the project sponsor held a Community Outreach Meeting for the proposed project. The meeting began at 7:00 P.M. on Tuesday, January 25, 2011 at La Barca restaurant, located at 2036 Lombard Street Street. Ten members of the public attended the meeting. As a result of community opposition to the proposal, a second meeting was held on Tuesday, July 12, 2011 at Moscone Recreation Center.
- 12. **Five-year plan:** Per the *Guidelines*, the project sponsor submitted its latest five-year plan, as required, in April 2011.
- 13. **Public Comment.** As of July 12, 2011, the Department has received public comment in opposition and in support of the proposal. Those in opposition to the following concerns: health-related impacts of the proposal; creation of an antenna "farm"; property values/view obstruction; methodology of establishing the need for the site; 27 "disk" attachments. Those in support of the proposal wish to have improved AT&T service in the neighborhood.
- 14.
- 15. **Planning Code Compliance.** The Commission finds that the Project is consistent with the relevant provisions of the Planning Code in the following manner:
 - A. **Use.** Per Planning Code Sections 234.2(a), a Conditional Use authorization is required for the installation of wireless transmission facilities.
- 16. **Planning Code Section 303** establishes criteria for the Planning Commission to consider when reviewing applications for Conditional Use approval. On balance, the project does comply with said criteria in that:
 - A. The proposed new uses and building, at the size and intensity contemplated and at the proposed location, will provide a development that is necessary or desirable, and compatible with, the neighborhood or the community.
 - *i* Desirable: San Francisco is a leader of the technological economy; it is important and desirable to the vitality of the city to have and maintain adequate telecommunications coverage and data capacity. This includes the installation and upgrading of systems to keep up with changing technology and increases in usage. It is desirable for the City to allow wireless facilities to be installed.

The proposed project at 2055 Lombard Street will be generally desirable and compatible with the surrounding neighborhood because the project will not conflict with the existing uses of the property and will be of such size and nature to be compatible with the surrounding nature of the vicinity. The approval of this authorization has been found, first and foremost, to insure public safety, and insure that the placement of antennas and related support and protection features are so located, designed, and treated architecturally to minimize their visibility from public places, to avoid intrusion into public vistas, avoid disruption of the architectural design integrity of building and insure harmony with neighborhood character.

ii Necessary: In the case of wireless installations, there are two criteria that the Commission reviews: coverage and capacity.

Coverage: San Francisco does have sufficient overall wireless coverage (note that this is separate from carrier service). It is necessary for San Francisco to have as much coverage as possible in terms of wireless facilities. Due to the topography and tall buildings in San Francisco, unique coverage issues arise because the hills and buildings break up coverage. Thus, telecommunication carriers often install additional installations to make sure coverage is sufficient.

Capacity: While a carrier may have adequate coverage in a certain area, the capacity may not be sufficient. With the continuous innovations in wireless data technology and demand placed on existing infrastructure, individual telecommunications carriers must upgrade and in some instances expand their facilities network to be able to have proper data distribution. It is necessary for San Francisco, as a leader in technology, to have adequate capacity.

The proposed project at 2055 Lombard Street is necessary in order to achieve sufficient street, in-transit and in-building mobile phone coverage. Recent drive tests in the subject area conducted by the AT&T Radio Frequency Engineering Team provide conclusive evidence that the subject property is the most viable location, based on factors including quality of coverage, population density, land use compatibility, zoning and aesthetics. The proposed coverage area will serve the vicinity bounded by Chestnut Street, Buchanan Street, Pixley Street and Steiner Street, as indicated in the coverage maps. This facility will fill in the gaps to improve coverage in the Marina District as well as to provide necessary facilities for emergency transmission and improved communication for the neighborhood, community and the region.

- B. The proposed project will not be detrimental to the health, safety, convenience or general welfare of persons residing or working in the vicinity. There are no features of the project that could be detrimental to the health, safety or convenience of those residing or working the area, in that:
 - i Nature of proposed site, including its size and shape, and the proposed size, shape and arrangement of structures;

The proposed project must comply with all applicable Federal and State regulations to safeguard the health, safety and to ensure that persons residing or working in the vicinity will not be affected, and prevent harm to other personal property.

The Department of Public Health conducted an evaluation of potential health effects from Radio Frequency radiation, and has concluded that the proposed wireless transmission facilities will have no adverse health effects if operated in compliance with the FCCadopted health and safety standards. The Department has received information that the proposed wireless system must be operated so as not to interfere with radio or television reception in order to comply with the provisions of its license under the FCC.

The Department is developing a database of all such wireless communications facilities operating or proposed for operation in the City and County of San Francisco. All applicants are now required to submit information on the location and nature of all existing and approved wireless transmission facilities operated by the Project Sponsor. The goal of this effort is to foster public information as to the location of these facilities.

ii The accessibility and traffic patterns for persons and vehicles, the type and volume of such traffic, and the adequacy of proposed off-street parking and loading;

No increase in traffic volume is anticipated with the facilities operating unmanned, with a single maintenance crew visiting the site once a month or on an as-needed basis.

iii The safeguards afforded to prevent noxious or offensive emissions such as noise, glare, dust and odor;

While some noise and dust may result from the erection of the antennas and transceiver equipment, noise or noxious emissions from continued use are not likely to be significantly greater than ambient conditions due to the operation of the wireless communication network.

iv Treatment given, as appropriate, to such aspects as landscaping, screening, open spaces, parking and loading areas, service areas, lighting and signs;

The antennas are proposed to be installed on the top of the existing elevator penthouse and screened from view with RF transparent material painted to match the penthouse. Mechanical equipment would be located on the roof of the parking lot resulting in the loss of up to 3 non-required off-street public parking spaces.

C. That the use as proposed will comply with the applicable provisions of the Planning Code and will not adversely affect the General Plan.

The Project complies with all relevant requirements and standards of the Planning Code and is consistent with objectives and policies of the General Plan as detailed below.

D. That the use as proposed would provide development that is in conformity with the purpose of the applicable Neighborhood Commercial District.

The proposed project is consistent with the stated purposed of the P District in that the intended use is located on an existing building approximately 50 feet tall and designed to resemble the existing penthouse.

17. **General Plan Compliance.** The Project is, on balance, consistent with the following Objectives and Policies of the General Plan

2004 HOUSING ELEMENT

HOUSING DENSITY, DENSITY, DESIGN & QUALITY OF LIFE

OBJECTIVE 11 - IN INCREASING THE SUPPLY OF HOUSING, PURSUE PLACE MAKING AND NEIGHBORHOOD BUILDING PRINCIPLES AND PRACTICES TO MAINTAIN SAN FRANCISCO'S DESIRABLE URBAN FABRIC AND ENHANCE LIVABILITY IN ALL NEIGHBORHOODS.

POLICY 11.2 - Ensure housing is provided with adequate public improvements, services, and amenities.

The Project will improve AT&T Mobility coverage in residential, commercial and recreational areas along primary transportation routes in San Francisco.

2009 HOUSING ELEMENT

BALANCE HOUSING CONSTRUCTION AND COMMUNITY INFRASTRUCTURE

OBJECTIVE 12 – BALANCE HOUSING GROWTH WITH ADEQUATE INFRASTRUCTURE THAT SERVES THE CITY'S GROWING POPULATION.

POLICY 12.2 – Consider the proximity of quality of life elements, such as open space, child care, and neighborhood services, when developing new housing units.

POLICY 12.3 – Ensure new housing is sustainable supported by the City's public infrastructure systems.

The project will improve Verizon Mobility coverage in residential, commercial and recreational areas along primary transportation routes in San Francisco

URBAN DESIGN HUMAN NEEDS

OBJECTIVE 4 - IMPROVEMENT OF THE NEIGHBORHOOD ENVIRONMENT TO INCREASE PERSONAL SAFETY, COMFORT, PRIDE AND OPPORTUNITY.

POLICY 4.14 - Remove and obscure distracting and cluttering elements.

The Project adequately "stealths" the proposed antennas and related equipment by locating the antennas within screening and the equipment on a public parking garage roof.

COMMERCE AND INDUSTRY ELEMENT

Objectives and Policies

OBJECTIVE 1:

MANAGE ECONOMIC GROWTH AND CHANGE TO ENSURE ENHANCEMENT OF THE TOTAL CITY LIVING AND WORKING ENVIRONMENT.

Policy 1:

Encourage development, which provides substantial net benefits and minimizes undesirable consequences. Discourage development, which has substantial undesirable consequences that cannot be mitigated.

Policy 2:

Assure that all commercial and industrial uses meet minimum, reasonable performance standards.

The project would enhance the total city living and working environment by providing communication services for residents and workers within the City. Additionally, the project would comply with Federal, State and Local performance standards.

OBJECTIVE 2:

MAINTAIN AND ENHANCE A SOUND AND DIVERSE ECONOMIC BASE AND FISCAL STRUCTURE FOR THE CITY.

Policy 1:

Seek to retain existing commercial and industrial activity and to attract new such activity to the city.

Policy 3:

Maintain a favorable social and cultural climate in the city in order to enhance its attractiveness as a firm location.

The site is an integral part of a wireless communications network that will enhance the City's diverse economic base.

OBJECTIVE 4:

IMPROVE THE VIABILITY OF EXISTING INDUSTRY IN THE CITY AND THE ATTRACTIVENESS OF THE CITY AS A LOCATION FOR NEW INDUSTRY.

Policy 1:

Maintain and enhance a favorable business climate in the City.

Policy 2:

Promote and attract those economic activities with potential benefit to the City.

The project would benefit the City by enhancing the business climate through improved communication services for residents and workers.

VISITOR TRADE

OBJECTIVE 8 - ENHANCE SAN FRANCISCO'S POSITION AS A NATIONAL CENTER FOR CONVENTIONS AND VISITOR TRADE.

POLICY 8.3 - Assure that areas of particular visitor attraction are provided with adequate public services for both residents and visitors.

The Project will ensure that residents and visitors have adequate public service in the form of AT&T's mobile telecommunications.

COMMUNITY SAFETY ELEMENT

Objectives and Policies

OBJECTIVE 3:

ENSURE THE PROTECTION OF LIFE AND PROPERTY FROM THE EFFECTS OF FIRE OR NATURAL DISASTER THROUGH ADEQUATE EMERGENCY OPERATIONS PREPARATION.

Policy 1:

Maintain a local agency for the provision of emergency services to meet the needs of San Francisco.

Policy 2:

Develop and maintain viable, up-to-date in-house emergency operations plans, with necessary equipment, for operational capability of all emergency service agencies and departments.

Policy 3:

Maintain and expand agreements for emergency assistance from other jurisdictions to ensure adequate aid in time of need.

Policy 4:

Establish and maintain an adequate Emergency Operations Center.

Policy 5:

Maintain and expand the city's fire prevention and fire-fighting capability.

Policy 6:

Establish a system of emergency access routes for both emergency operations and evacuation.

The project would enhance the ability of the City to protect both life and property from the effects of a fire or natural disaster by providing communication services.

- 18. **Planning Code Section 101.1(b)** establishes eight priority-planning policies and requires review of permits for consistency with said policies. On balance, the project does comply with said policies in that:
 - A. That existing neighborhood-serving retail uses be preserved and enhanced and future opportunities for resident employment in and ownership of such businesses be enhanced.

No neighborhood-serving retail use would be displaced and the wireless communications network will enhance personal communication services.

B. That existing housing and neighborhood character be conserved and protected in order to preserve the cultural and economic diversity of our neighborhoods.

No residential uses would be displaced or altered in any way by the granting of this authorization.

C. That the City's supply of affordable housing be preserved and enhanced.

The project would have no adverse impact on housing in the vicinity.

D. That commuter traffic not impede MUNI transit service or overburden our streets or neighborhood parking.

Due to the nature of the project and minimal maintenance or repair, municipal transit service would not be impeded and neighborhood parking would not be overburdened.

E. That a diverse economic base be maintained by protecting our industrial and service sectors from displacement due to commercial office development, and that future opportunities for resident employment and ownership in these sectors be enhanced.

The Project would cause no displacement of industrial and service sector activity.

- F. That the City achieve the greatest possible preparedness to protect against injury and loss of life in an earthquake.
 Compliance with applicable structural safety and seismic safety requirements would be considered during the building permit application review process.
- G. That landmarks and historic buildings be preserved.

The site contains a mixed-use building constructed in approximately 1987.

H. That our parks and open space and their access to sunlight and vistas be protected from development.

The Project will have no adverse impact on parks or open space, or their access to sunlight or vistas.

- 19. The Project is consistent with and would promote the general and specific purposes of the Code provided under Section 101.1(b) in that, as designed, the Project would contribute to the character and stability of the neighborhood and would constitute a beneficial development.
- 20. The Commission hereby finds that approval of the Determination of Compliance authorization would promote the health, safety and welfare of the City.

DECISION

The Commission, after carefully balancing the competing public and private interests, and based upon the Recitals and Findings set forth above, in accordance with the standards specified in the Code, hereby approves the Conditional Use authorization under Planning Code Sections 234.2(a) and 303 to install up to nine panel antennas on the top of an exsiting elevator penthouse and screened from view, and associated equipment cabinets on the roof of a four-story public parking garage with a post office in the ground floor commercial space as part of a wireless transmission network operated by AT&T Mobility on a Location Preference One (Preferred Location – Publicly-used structure) according to the *Wireless Telecommunications Services (WTS) Siting Guidelines*, within a P (Public) Zoning District and a 40-X Height and Bulk District and subject to the conditions of approval attached hereto as **Exhibit A**.

APPEAL AND EFFECTIVE DATE OF MOTION: Any aggrieved person may appeal this conditional use authorization to the Board of Supervisors within thirty (30) days after the date of this Motion No. XXXX. The effective date of this Motion shall be the date of this Motion if not appealed (after the 30-day period has expired) OR the date of the decision of the Board of Supervisors if appealed to the Board of Supervisors. For further information, please contact the Board of Supervisors at (415) 554-5184, City Hall, Room 244, 1 Dr. Carlton B. Goodlett Place, San Francisco, CA 94102.

I hereby certify that the foregoing Motion was adopted by the Planning Commission on **July 28**, **2011**.

Linda Avery Commission Secretary

AYES:

NAYS:

ABSENT:

ADOPTED: July 28, 2011

Exhibit A Conditions of Approval

Whenever "Project Sponsor" is used in the following conditions, the conditions shall also bind any successor to the Project or other persons having an interest in the Project or underlying property.

AUTHORIZATION

This approval is for Conditional Use authorization under Planning Code Sections 234.2(a) and 303 to install a wireless telecommunications facility consisting of nine panel antennas with related equipment, a Location Preference 1 (Preferred Location – Publicly-used Structure) according to the *Wireless Telecommunications Services (WTS) Siting Guidelines*, as part of AT&T's wireless telecommunications network within a P (Public) Zoning District and a 40-X Height and Bulk District.

RECORDATION OF CONDITIONS OF APPROVAL

Prior to the issuance of the building permit or commencement of use for the Project the Zoning Administrator shall approve and order the recordation of a Notice in the Official Records of the Recorder of the City and County of San Francisco for the subject property. This Notice shall state that the project is subject to the conditions of approval contained herein and reviewed and approved by the Planning Commission on **July 28, 2011** under Motion No.XXXXX.

PRINTING OF CONDITIONS OF APPROVAL ON PLANS

The conditions of approval under the 'Exhibit A' of this Planning Commission Motion No. XXXXX shall be reproduced on the Index Sheet of construction plans submitted with the Site or Building permit application for the Project. The Index Sheet of the construction plans shall reference to the Conditional Use authorization and any subsequent amendments or modifications.

SEVERABILITY

The Project shall comply with all applicable City codes and requirements. If any clause, sentence, section or any part of these conditions of approval is for any reason held to be invalid, such invalidity shall not affect or impair other remaining clauses, sentences, or sections of these conditions. This decision conveys no right to construct, or to receive a building permit. "Project Sponsor" shall include any subsequent responsible party.

CHANGES AND MODIFICATIONS

Changes to the approved plans may be approved administratively by the Zoning Administrator. Significant changes and modifications of conditions shall require Planning Commission approval of a new Conditional Use authorization.

PERFORMANCE

1. Validity and Expiration. The authorization and right vested by virtue of this action is valid for three years from the effective date of the Motion. A building permit from the Department of Building Inspection to construct the project and/or commence the approved use must be issued as this Conditional Use authorization is only an approval of the proposed project and conveys no independent right to construct the project or to commence the approved use. The Planning Commission may, in a public hearing, consider the revocation of the approvals granted if a site or building permit has not been obtained within three (3) years of the date of the Motion approving the Project. Once a site or building permit has been issued, construction must commence within the timeframe required by the Department of Building Inspection and be continued diligently to completion. The Commission may also consider revoking the approvals if a permit for the Project has been issued but is allowed to expire and more than three (3) years have passed since the Motion was approved.

For information about compliance, contact Code Enforcement, Planning Department at 415-575-6863, <u>www.sf-planning.org</u>.

2. **Extension.** This authorization may be extended at the discretion of the Zoning Administrator only where failure to issue a permit by the Department of Building Inspection to perform said tenant improvements is caused by a delay by a local, State or Federal agency or by any appeal of the issuance of such permit(s).

For information about compliance, contact Code Enforcement, Planning Department at 415-575-6863, <u>www.sf-planning.org</u>.

DESIGN – COMPLIANCE AT PLAN STAGE

- 3. **Plan Drawings WTS**. Prior to the issuance of any building or electrical permits for the installation of the facilities, the Project Sponsor shall submit final scaled drawings for review and approval by the Planning Department ("Plan Drawings"). The Plan Drawings shall describe:
 - a. Structure and Siting. Identify all facility related support and protection measures to be installed. This includes, but is not limited to, the location(s) and method(s) of placement, support, protection, screening, paint and/or other treatments of the antennas and other appurtenances to insure public safety, insure compatibility with urban design, architectural and historic preservation principles, and harmony with neighborhood character.
 - b. For the Project Site, regardless of the ownership of the existing facilities. Identify the location of all existing antennas and facilities; and identify the location of all approved (but not installed) antennas and facilities.

- c. Emissions. Provide a report, subject to approval of the Zoning Administrator, that operation of the facilities in addition to ambient RF emission levels will not exceed adopted FCC standards with regard to human exposure in uncontrolled areas. *For information about compliance, contact the Case Planner, Planning Department at* 415-558-6613, <u>www.sf-planning.org</u>.
- 4. **Screening WTS.** To the extent necessary for information about compliance with adopted FCC regulations regarding human exposure to RF emissions, and upon the recommendation of the Zoning Administrator, the Project Sponsor shall:
 - a. Modify the placement of the facilities;
 - b. Install fencing, barriers or other appropriate structures or devices to restrict access to the facilities;
 - c. Install multi-lingual signage, including the RF radiation hazard warning symbol identified in ANSI C95.2 1982, to notify persons that the facility could cause exposure to RF emissions;
 - d. Implement any other practice reasonably necessary to ensure that the facility is operated in compliance with adopted FCC RF emission standards.
 - e. To the extent necessary to minimize visual obtrusion and clutter, installations shall conform to the following standards:
 - f. Antennas and back up equipment shall be painted, fenced, landscaped or otherwise treated architecturally so as to minimize visual impacts;
 - g. Rooftop installations shall be setback such that back up facilities are not viewed from the street;
 - h. Antennae attached to building facades shall be so placed, screened or otherwise treated to minimize any negative visual impact; and
 - i. Although co location of various companies' facilities may be desirable, a maximum number of antennas and back up facilities on the Project Site shall be established, on a case by case basis, such that "antennae farms" or similar visual intrusions for the site and area is not created.

For information about compliance, contact the Case Planner, Planning Department at 415-558-6613, <u>www.sf-planning.org</u>.

MONITORING - AFTER ENTITLEMENT

5. **Enforcement.** Violation of any of the Planning Department conditions of approval contained in this Motion or of any other provisions of Planning Code applicable to this Project shall be subject to the enforcement procedures and administrative penalties set forth under Planning Code Section 176 or Section 176.1. The Planning Department may also refer the violation complaints to other city departments and agencies for appropriate enforcement action under their jurisdiction.

For information about compliance, contact Code Enforcement, Planning Department at 415-575-6863, <u>www.sf-planning.org</u>

6. **Monitoring.** The Project requires monitoring of the conditions of approval in this Motion. The Project Sponsor or the subsequent responsible parties for the Project shall pay fees as established under Planning Code Section 351(e) (1) and work with the Planning Department for information about compliance.

For information about compliance, contact Code Enforcement, Planning Department at 415-575-6863, <u>www.sf-planning.org</u>

7. **Revocation due to Violation of Conditions.** Should implementation of this Project result in complaints from interested property owners, residents, or commercial lessees which are not resolved by the Project Sponsor and found to be in violation of the Planning Code and/or the specific Conditions of Approval for the Project as set forth in Exhibit A of this Motion, the Zoning Administrator shall refer such complaints to the Commission, after which it may hold a public hearing on the matter to consider revocation of this authorization.

For information about compliance, contact Code Enforcement, Planning Department at 415-575-6863, <u>www.sf-planning.org</u>.

8. Implementation and Monitoring Costs - WTS.

- a. The Project Sponsor, on an equitable basis with other WTS providers, shall pay the cost of preparing and adopting appropriate General Plan policies related to the placement of WTS facilities. Should future legislation be enacted to provide for cost recovery for planning, the Project Sponsor shall be bound by such legislation.
- b. The Project Sponsor or its successors shall be responsible for the payment of all reasonable costs associated with the monitoring of the conditions of approval contained in this authorization, including costs incurred by this Department, the Department of Public Health, the Department of Electricity and Telecommunications, Office of the City Attorney, or any other appropriate City Department or agency pursuant to Planning Code Section 351(f) (2). The Planning Department shall collect such costs on behalf of the City.
- c. The Project Sponsor shall be responsible for the payment of all fees associated with the installation of the subject facility, which are assessed by the City pursuant to all applicable law.

For information about compliance, contact Code Enforcement, Planning Department at 415-575-6863, *www.sf-planning.org*

9. **Implementation and Monitoring - WTS**. In the event that the Project implementation report includes a finding that RF emissions for the site exceed FCC Standards in any uncontrolled location, the Zoning Administrator may require the Applicant to immediately cease and desist operation of the facility until such time that the violation is corrected to the satisfaction of the Zoning Administrator.

For information about compliance, contact Code Enforcement, Planning Department at 415-575-6863, <u>www.sf-planning.org</u>

- 10. **Project Implementation Report WTS**. The Project Sponsor shall prepare and submit to the Zoning Administrator a Project Implementation Report. The Project Implementation Report shall:
 - a. Identify the three dimensional perimeter closest to the facility at which adopted FCC standards for human exposure to RF emissions in uncontrolled areas are satisfied;

- b. Document testing that demonstrates that the facility will not cause any potential exposure to RF emissions that exceed adopted FCC emission standards for human exposure in uncontrolled areas.
- c. The Project Implementation Report shall compare test results for each test point with applicable FCC standards. Testing shall be conducted in compliance with FCC regulations governing the measurement of RF emissions and shall be conducted during normal business hours on a non holiday weekday with the subject equipment measured while operating at maximum power.
- d. Testing, Monitoring, and Preparation. The Project Implementation Report shall be prepared by a certified professional engineer or other technical expert approved by the Department. At the sole option of the Department, the Department (or its agents) may monitor the performance of testing required for preparation of the Project Implementation Report. The cost of such monitoring shall be borne by the Project Sponsor pursuant to the condition related to the payment of the City's reasonable costs.
 - i. Notification and Testing. The Project Implementation Report shall set forth the testing and measurements undertaken pursuant to Conditions 2 and 4.
 - ii. Approval. The Zoning Administrator shall request that the Certification of Final Completion for operation of the facility not be issued by the Department of Building Inspection until such time that the Project Implementation Report is approved by the Department for compliance with these conditions.

For information about compliance, contact the Environmental Health Section, Department of Public Health at (415) 252-3800, <u>www.sfdph.org</u>.

- 11. Notification prior to Project Implementation Report WTS. The Project Sponsor shall undertake to inform and perform appropriate tests for residents of any dwelling units located within 25 feet of the transmitting antenna at the time of testing for the Project Implementation Report.
 - a. At least twenty calendar days prior to conducting the testing required for preparation of the Project Implementation Report, the Project Sponsor shall mail notice to the Department, as well as to the resident of any legal dwelling unit within 25 feet of a transmitting antenna of the date on which testing will be conducted. The Applicant will submit a written affidavit attesting to this mail notice along with the mailing list.
 - b. When requested in advance by a resident notified of testing pursuant to subsection (a), the Project Sponsor shall conduct testing of total power density of RF emissions within the residence of that resident on the date on which the testing is conducted for the Project Implementation Report.

For information about compliance, contact Code Enforcement, Planning Department at 415-575-6863, <u>www.sf-planning.org</u>

12. **Installation - WTS.** Within 10 days of the installation and operation of the facilities, the Project Sponsor shall confirm in writing to the Zoning Administrator that the facilities are being maintained and operated in compliance with applicable Building, Electrical and other Code requirements, as well as applicable FCC emissions standards.

For information about compliance, contact Code Enforcement, Planning Department at 415-575-6863, *www.sf-planning.org*

13. **Periodic Safety Monitoring - WTS.** The Project Sponsor shall submit to the Zoning Administrator 10 days after installation of the facilities, and every two years thereafter, a certification attested to by a licensed engineer expert in the field of EMR/RF emissions, that the facilities are and have been operated within the then current applicable FCC standards for RF/EMF emissions.

For information about compliance, contact the Environmental Health Section, Department of Public Health at (415) 252-3800, <u>www.sfdph.org</u>.

OPERATION

www.sf-planning.org

14. **Community Liaison.** Prior to issuance of a building permit application to construct the project and implement the approved use, the Project Sponsor shall appoint a community liaison officer to deal with the issues of concern to owners and occupants of nearby properties. The Project Sponsor shall provide the Zoning Administrator written notice of the name, business address, and telephone number of the community liaison. Should the contact information change, the Zoning Administrator shall be made aware of such change. The community liaison shall report to the Zoning Administrator what issues, if any, are of concern to the community and what issues have not been resolved by the Project Sponsor. *For information about compliance, contact Code Enforcement, Planning Department at 415-575-6863,*

15. **Out of Service – WTS**. The Project Sponsor or Property Owner shall remove antennae and equipment that has been out of service or otherwise abandoned for a continuous period of six months.

For information about compliance, contact Code Enforcement, Planning Department at 415-575-6863, *www.sf-planning.org*

16. Emissions Conditions – WTS. It is a continuing condition of this authorization that the facilities be operated in such a manner so as not to contribute to ambient RF/EMF emissions in excess of then current FCC adopted RF/EMF emission standards; violation of this condition shall be grounds for revocation.

For information about compliance, contact the Environmental Health Section, Department of Public Health at (415) 252-3800, <u>www.sfdph.org</u>.

17. **Noise and Heat – WTS**. The WTS facility, including power source and cooling facility, shall be operated at all times within the limits of the San Francisco Noise Control Ordinance. The WTS facility, including power source and any heating/cooling facility, shall not be operated so as to cause the generation of heat that adversely affects a building occupant.

For information about compliance, contact the Environmental Health Section, Department of Public Health at (415) 252-3800, <u>www.sfdph.org</u>.

18. **Transfer of Operation – WTS**. Any carrier/provider authorized by the Zoning Administrator or by the Planning Commission to operate a specific WTS installation may assign the operation of the facility to another carrier licensed by the FCC for that radio frequency provided that such transfer is made known to the Zoning Administrator in advance of such

operation, and all conditions of approval for the subject installation are carried out by the new carrier/provider.

For information about compliance, contact Code Enforcement, Planning Department at 415-575-6863, <u>www.sf-planning.org</u>

19. **Compatibility with City Emergency Services – WTS**. The facility shall not be operated or caused to transmit on or adjacent to any radio frequencies licensed to the City for emergency telecommunication services such that the City's emergency telecommunications system experiences interference, unless prior approval for such has been granted in writing by the City.

For information about compliance, contact the Department of Technology, 415-581-4000, <u>http://sfgov3.org/index.aspx?page=1421</u>

 $G: \label{eq:G:DOCUMENTS} CONDITIONAL USES \ 2010.0987 CR - 2055 \ Lombard, \ AT \&T \ Conditional \ Use \ Authorization - Wireless \ Motion.doc$

Zoning District Map



ZONING USE DISTRICTS

RESIDENTIAL, HOUSE DISTRICTS								
RH-1(D)	RH-1	RH-1(S)	RH-2	RH-3				
RESIDENTIAL, MIXED (APARTMENTS & HOUSES) DISTRICTS								
RM-1	RM-2	RM-3	RM-4					
NEIGHBORHOOD COMMERCIAL DISTRICTS								
NC-1	NC-2	NC-3	NCD	NC-S				
SOUTH OF MARKET MIXED USE DISTRICTS								
SPD	RED	RSD	SLR	SLI	SSO			
COMMERCIAL DISTRICTS								
C-2	C-3-S	C-3-G	C-3-R	C-3-O	C-3-O(SD)			
INDUSTRIAL DISTRICTS								
C-M	M-1	M-2						





Height and Bulk Map



Parcel Map



Sanborn Map*



*The Sanborn Maps in San Francisco have not been updated since 1998, and this map may not accurately reflect existing conditions.



Aerial Photo





SUBJECT PROPERTY

Context Photos



View northwest from intersection of Lombard and Webster Streets.



View east from intersection of Lombard and Fillmore Streets.



View west from intersection of Webster and Moulton Streets.



Photosimulation of the proposed telecommunication facility as seen looking southeast across Lombard Street




















July 13, 2011

Sara Vellve, Planner San Francisco Department of Planning 1650 Mission Street, 4th Floor San Francisco, CA 94103

Re: Community Meetings for proposed AT&T Mobility facility at 2055 Lombard Street

Dear Ms. Vellve,

On January 25, 2011, AT&T Mobility conducted a community outreach meeting regarding the proposed wireless facility at 2055 Lombard Street (2010.0987 C). The meeting was held at La Barca restaurant at 2036 Lombard Street at 7:00 p.m. Notification of the outreach meeting was sent out on January 11, 2011 to 942 owners and tenants within 500 feet of the proposed installation and 18 neighborhood organizations.

Erin Whitney of KDI Planning, conducted the meeting on behalf of AT&T Mobility as the project sponsor along with myself, Theadora Vriheas and Marc Blakeman of AT&T's External Affairs, and Bill Hammett, a radio-frequency engineer with Hammett and Edison, Inc. who was there to answer any questions regarding the EMF emissions from the proposed wireless facility. There were six (6) members of the community along with two (2) legislative aides from Mark Ferrell's office who attended the meeting. Various questions were asked regarding the facility; however, the primary concern was the perceived EMF emissions that the proposed facility would have. The majority of those who attended expressed opposition to the proposed facility based on the perceived impact of EMF emissions. In regards to design of the facility, two comments were noted: 1) a suggestion to remove the screen wall from around the antennas with the notion that the screen wall would have more of a visual impact than exposed antennas, 2) a concern that the proposed extension would block a neighbor's view.

Due to increasing interest in the proposed project, AT&T held a second community meeting on July 12, 2011. The meeting was held at the Moscone Recreation Center at 1800 Chestnut Street at 7:00 p.m. Notification of the outreach meeting was sent out on June 28, 2011 to 942 owners and tenants within 500 feet of the proposed installation and 17 neighborhood organizations.

I conducted the meeting on behalf of AT&T Mobility as the project sponsor along with Theadora Vriheas of A&T's External Affairs, and Raj Mathur, a radio-frequency engineer with Hammett and Edison, Inc. who was there to answer any questions regarding the EMF emissions from the proposed wireless facility. There were five (5) members of the community along with one (1) legislative aide from Mark Ferrell's office who attended the meeting. The primary concern was the perceived EMF emissions that the proposed facility would have. Those who attended expressed opposition to the proposed facility based on the perceived impact of EMF emissions. In regards to design of the facility one community member expressed concern that the proposed installation would block their existing view.

Please contact me if you have any questions or concerns.

Sincerely,

Amy Million KDI Planning, representing AT&T Mobility

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JOHN DI BENE General Attorney Legal Department

AT&T Services, Inc. 2600 Camino Ramon Room 2W901 San Ramon, CA 94583

925.543.1548 Phone 925.867.3869 Fax jdb@att.com

July 11, 2011

Via E-mail [linda.avery@sfgov.org]

Linda Avery Commission Secretary San Francisco Planning Commission 1650 Mission Street, Suite 400 San Francisco, CA 94103

Re: New Cingular Wireless PCS, LLC, CUP No. 2010.0987C 2055 Lombard Street

Dear President Olague, Vice President Miguel and Commissioners Antonini, Borden, Moore, Sugaya, and Fong:

I write to provide further explanation and illustration of the evidence already in the record in CUP case number 2010.0987C, an application filed by New Cingular Wireless PCS, LLC d/b/a AT&T Mobility ("AT&T") to place a cell site on a public parking garage located at 2055 Lombard Street in San Francisco (the "Site"). Specifically, the purpose of this letter is to provide the Commission with additional clarification of the record evidence concerning the extent of the significant service coverage gap in the area around the Site and outline the governing legal requirements of the Telecommunications Act of 1996 that require granting the application. This information is consistent with the complete and accurate information that your Staff relied upon in its May 19, 2011 recommendation to approve the permit with conditions and is being provided to the Commission as additional clarification before a final decision.

This application seeks authority for AT&T to place 9 panel antennas above an existing elevator penthouse at the Site's northwest corner. The property is a Location Preference 1 (Publicly-used structure) as the Site is developed as a public parking garage and post office. The necessary additional equipment will also be located on the roof the garage. Both the antennas and additional equipment will be located in screening to adequately shield from view.

This site is necessary for AT&T to close a significant service coverage gap in its wireless network as explained in more detail below. The gap is caused, in part, by the significant demand from AT&T's customers for mobile data usage in the area. This increase is consistent with the *8,000% increase* in mobile data demand AT&T experienced network-wide over the past four years. AT&T expects total mobile data volume to *grow 8-10 times* over the next five years. To put this estimate in perspective, all of AT&T's mobile traffic volume during 2010 would be equal to the mobile traffic volume for a mere six or seven weeks of 2015.

This increased service volume tasks AT&T's network and adversely affects service coverage. High demand for voice and mobile data services cause increased noise on each radio frequency channel — much as it is more difficult to hear when there are many people talking in a crowded room. This noise can degrade the quality of both voice and data wireless services, making it hard to get dial tone, causing dropped calls, or significantly slowing the speed of data services. This type of service degradation is currently being experienced in the area around the Site. The Site is necessary to help address the significant increase in demand, close the resulting service coverage gap, and improve AT&T's service quality in the surrounding area.

This letter provides a general survey of the key federal legal standards governing this application, and it turns to the main substantive issues – that the health concerns regarding radio frequency (RF) emissions raised in this record are preempted by federal law, that granting this application is supported by substantial evidence in the record, and that a denial of the application would be an unlawful prohibition of wireless service. But before doing that, let me begin by offering additional clarification to explain how the growth in wireless service demand has created the significant service coverage gap around the Site.

I. The Significant Service Coverage Gap

Attachment A is a statement by Gordon Spencer, an AT&T radio frequency expert. Mr. Spencer's statement explains that during periods of high data usage the AT&T network experiences a significant service coverage gap in the area roughly bordered by Chestnut Way, Steiner, Pixley, and Buchanan streets (the "Significant Gap"). Mr. Spencer's statement provides expert testimony explaining how the extraordinary growth of data and voice usage on AT&T's wireless network in this area has adversely affected the reliability and accessibility of the network around the Site.

Mr. Spencer explains how AT&T's existing facilities in the area cannot adequately serve its customers during these periods of increased usage today, and they do not have the capacity required to handle forecasted usage. He also explains that this gap exists even though there may be reasonable outdoor signal strength in the area (several bars signal strength on a phone, for instance) — the user-generated interference overwhelms the frequency, which causes the service coverage indoors to be weak and the overall quality of service to be unacceptable. AT&T uses service quality information to indentify the areas in its network where these capacity restraints limit service. Exhibit 2 to Mr. Spencer's statement contains a map that uses service quality information to depict a service coverage gap near the Site, with the yellow shaded cross-hatched areas and the pink shaded areas of the map showing the areas of the service coverage gap.

The service coverage gap identified by Mr. Spencer is significant because it occurs during all periods of the day, except in the evenings. Thus, when AT&T's customers most require use of their mobile devices in the area, and when most users want to use their mobile phones, service coverage is unacceptable. Exhibit 3 to Mr. Spencer's Statement provides a current 24-hour traffic profile for the location, which shows that on a typical workday commercial and residential users in the area currently experience unacceptable service quality — including the inability to access the network to place data and voice calls. The gap includes service along Lombard Street, which is a major thoroughfare and a main route to the Golden Gate Bridge. There are numerous major tourist areas, hotels, and stand-alone stores within the gap area. The entire area surrounding the Site is a fashionable shopping and living area for young professionals, which is high density Smartphone territory.

II. Key Legal Requirements

As a FCC-licensed wireless telecommunications services provider, AT&T's placement of its wireless antenna facilities is subject to the federal Telecommunications Act. That statute reconciles any potential conflicts between the need for deployment of a new wireless communications facility ("WCF") and local land use authority "by placing certain limitations on localities' control over the construction and modification of WCFs." *Sprint PCS Assets, LLC v. City of Palos Verdes Estates,* 583 F.3d 716, 721 (9th Cir. 2009). Specifically, as relevant here, the Telecommunications Act preserves local control over land use decisions, subject to the following explicit statutory restrictions:

- The local government must act on a permit application within a reasonable period of time (47 U.S.C. §332(c)(7)(B)(ii)).
- The local government may not regulate the placement, construction, or modification of WCFs on the basis of the environmental effects of radio frequency emissions to the extent such facilities comply with the FCC's regulations concerning such emissions (47 U.S.C. §332(c)(7)(B)(iv));
- Any local government decision to deny a siting request must be in writing and supported by substantial evidence contained in a written record (47 U.S.C. §332(c)(7)(B)(iii));
- The local government may not unreasonably discriminate among providers of functionally equivalent services (47 U.S.C. §332(c)(7)(B)(i)(I)); and
- The local government's decision must not "prohibit or have the effect of prohibiting the provision of personal wireless services" (47 U.S.C. §332(c)(7)(B)(i)(II)).

With this legal framework in mind, I address below certain specific issues that have been raised in the record regarding this application.

III. Federal Law Preempts Regulation Based on Environmental Effects of Radio Frequency Emissions.

At a community meeting on January 25, 2001, a specific concern was raised regarding the health effects to exposure to radio frequency ("RF") emissions. As noted above, local governments are specifically precluded from considering any alleged health or environmental effects of RF emissions in making decisions as to the siting of WCFs "to the extent such facilities comply with the FCC's regulations concerning such emissions." *See* 47 U.S.C. \$332(c)(7)(B)(iv)). Here, it is beyond dispute that the proposed equipment will operate well below applicable FCC limits.

A March 18, 2011 RF engineering analysis provided by Hammett & Edison, Inc., Consulting Engineers confirms that the proposed equipment will operate well within (and actually far below) all applicable FCC public exposure limits. A copy of this report is attached to Staff's recommendation to approve the permit with conditions. Given the compliance with the FCC standards, this application cannot be rejected based on such health concerns of RF emissions. This is true whether those concerns are raised explicitly or indirectly through some proxy such as "property values" or even, in some instances, aesthetics. A federal district court in California has held that in light of the federal preemption of RF regulation, "concern over the decrease in property values may not be considered as substantial evidence if the fear of property value depreciation is based on concern over the health effects caused by RF emissions." AT&T *Wireless Services of California LLC v. City of Carlsbad*, 308 F.Supp.2d 1148, 1159 (S.D. Cal. 2003).

To the extent that objections to this application are animated by concerns over RF frequency radiation, the Commission cannot consider them. An additional community meeting is scheduled for July 12, 2011 to further assure the public that the proposed equipment will operate well below applicable FCC RF emission limits.

IV. The Record Contains Substantial Evidence In Favor Of This Application

As noted above in Part II, the "substantial evidence" requirement means that a local government's decision must be "authorized by applicable local regulations and supported by a reasonable amount of evidence." See *Metro PCS, Inc. v. City and County of San Francisco,* 400 F3d 715, 725 (9th Cir. 2005); *see also Sprint PCS,* 583 F.3d at 726 (a local government decision must be valid under local law and supported by "such relevant evidence as a reasonable mind might accept as adequate to support a conclusion"). In other words, a local government must have specific reasons that are both consistent with the local regulations and supported by substantial evidence in the record to deny a permit. Generalized concerns or opinions about aesthetics are insufficient to constitute substantial evidence upon which a local government could deny a permit. *City of Rancho Palos Verdes v. Abrams,* 101 Cal.App.4th 367, 381 (2002).

Here, the proposed equipment complies with the standards for review (Sections 209.6 and 303 of the San Francisco Planning Code) and the City's WTS Facilities Siting Guidelines. The proposed equipment is also consistent with San Francisco's General Plan,

which supports development of technologically advanced communications infrastructure and growth of emerging telecommunications industries.

IV. This Application Must Be Approved Under The Federal "Prohibition" Preemption

As noted above, a municipality cannot act in such a manner so to create an "effective prohibition" of wireless services. Courts have found an "effective prohibition" exists where a wireless carrier demonstrates (1) a "significant gap" in wireless service coverage; and (2) that the proposed facility would provide the "least intrusive means," in relation to the land use values embodied in local regulations, to provide the service coverage necessary to fill that gap. *See e.g., Metro PCS,* 400 F.3d at 734-35; *Sprint PCS,* 583 F.3d at 726. If a wireless carrier satisfies both of these requirements, state and local standards that would otherwise be sufficient to permit denial of the facility are preempted and the municipality must approve the wireless facility. *See T-Mobile USA, Inc. v. City of Anacortes,* 572 F.3d 987, 999 (9th Cir. 2009). When a wireless provider presents evidence of a significant gap and the absence of a less intrusive alternative, the burden shifts to the local government to prove that a less intrusive alternative exists. In order to meet this burden (and overcome the presumption in favor of federal preemption), the local government must show that another alternative is available that fills the significant gap in coverage, that it is technologically feasible, and that it is "less intrusive" than the proposed facility. *Id.,* 572 F.3d at 998-999.

Here, AT&T has met both of these standards. First, AT&T has shown a significant service coverage gap. The evidence submitted in the application and in Mr. Spencer's statement in Attachment A show undisputable evidence of a wireless service coverage gap. As Mr. Spencer's statement explains, this gap is significant: the service degradation is most acute during daytime hours on a typical workday, at which time the coverage and reliability of the network is compromised (dropped calls) and the network becomes inaccessible (inability to connect, slow or no downloads) to users within the Significant Gap. Further, as Mr. Spencer explains, during high usage periods the geographic service coverage of the site contracts and causes gaps in service coverage (depicted by the yellow shaded cross hatched areas in Exhibit 2). Also, there are areas that do not have sufficient signal strength to provide reliable indoor coverage.

AT&T RF engineers have determined that updating this site will close this gap and enable AT&T to provide acceptable quality service at times most critical to wireless customers in the area; that is, during a typical weekday when the need for communication is high and may be critical, particularly in times of crisis.

AT&T has also proven that the Site would be the least intrusive means by which to fill the significant service coverage gap. In San Francisco, the intrusiveness of an application must be determined in reference to the preferences contained in Section 8.1 of the WTS Facilities Siting Guidelines. The Site is a Preference 1 (Publicly-used structure) location, which is the preferred location under the Guidelines. AT&T has also complied with each section of the Planning Department's Application Checklist for Conditional Use Applications for Wireless Telecommunications Facilities.

Thus, AT&T has established both a significant wireless service coverage gap and that upgrading the wireless facilities at the Site would be the least intrusive means by which to close the gap. Under federal law, if these two criteria are shown, the facility must be approved.1

Conclusion

AT&T is diligently trying to upgrade its network to meet the exploding wireless telecommunications demand within San Francisco. It is doing so in a manner that takes prudent and careful consideration of the aesthetic impacts of its facilities and the values the City seeks to promote. This application is fully consistent with City land use regulations and the WTS guidelines, and upgrading the proposed site would be the least intrusive means by which AT&T could fill the significant wireless service coverage gap in the area. I urge the Planning Commission to approve Conditional Use Permit No. 2010.0987C.

Very truly yours,

John di Bene

Sara Vellve, SF Planner cc:

Attachment A: Statement of Gordon Spencer

¹ 47 USC §332(c)(7)(B)(i)(II).

Attachment A

AT&T MOBILITY CONDITIONAL USE PERMIT APPLICATION 2055 LOMBARD STREET

STATEMENT OF GORDON SPENCER

I served as AT&T's radio frequency engineer with respect to the proposed wireless communications facility at 2055 Lombard Street (the "Property"). Based on my personal knowledge of the Property and with AT&T's wireless network, as well as my review of AT&T's records with respect to the Property and its wireless telecommunications facilities in the surrounding area, I have concluded that the work associated with this permit request is needed to close a significant service coverage gap in the area roughly bordered by Chestnut Way, Steiner, Pixley, and Buchanan Streets.

The service coverage gap is caused by obsolete and inadequate infrastructure along with increased use of wireless broadband services (3G Smartphone) in the area. As explained further in Exhibit 1, AT&T's existing facilities cannot adequately serve its customers in the desired area of coverage, let alone address rapidly increasing data usage. Although there is reasonable outdoor signal strength in the area, coverage indoors is weak and the quality of service overall is unacceptable.

AT&T uses Signal-to-Noise information to indentify the areas in its network where capacity restraints limit service. This information is developed from many sources including terrain and clutter databases, which that simulate the environment, and propagation models that simulate signal propagation in the presence of terrain and clutter variation. Signal-to-Noise information measures the difference between the signal strength and the noise floor within a radio frequency channel, which, in turn, provides a measurement of service quality in an area. Although the signal level may be adequate by itself, the noise level fluctuates with usage due to the nature of the 3G technology and at certain levels of usage the noise level rises to a point where the signal-to-noise ratio is not adequate to maintain a good level of service. In other words, while the signal itself fluctuates as a function of distance of the user from the base station, the noise level fluctuates with the level of usage on the network on all mobiles and base stations

in the vicinity. Signal-to-Noise information identifies where the radio frequency channel is usable; as noise increases during high usage periods, the range of the radio frequency channel declines such that the service coverage area for the cell restricts.

Exhibit 2 to this Statement is a map of existing service coverage (without the proposed installation at the Property) in the area at issue. It includes service coverage provided by existing AT&T sites. The green shaded areas depict areas within a Signal-to-Noise range that provide acceptable service coverage even during high demand periods. Thus, based upon current usage, customers are able to initiate and complete voice or data calls either outdoors or most indoor areas at any time of the day, independent of the number of users on the network. The yellow shaded cross-hatched areas depict areas within a Signal-to-Noise range that results in a service coverage gap during high demand periods. In this area, severe service interruptions occur during periods of high usage, but reliable and uninterrupted service may be available during low demand periods. The pink shaded areas depict areas within a Signal-to-Noise range where there is a service coverage gap at all times, especially indoors. The availability of reliable and uninterrupted voice and data service in all three of these areas can depend greatly upon whether a particular user is indoors, outdoors, stationary, or in transit. Under AT&T's wireless customer service standards, any area in the pink or yellow cross-hatched category is considered inadequate service coverage and constitutes a service coverage gap.

Exhibit 3 to this Statement depicts the current actual voice and data usage in the immediate area. In actuality, the service coverage footprint is constantly changing; wireless engineers call it "cell breathing" and during high usage periods, as depicted in the chart, the service coverage gap increases substantially. The time periods for which service is not available under highest usage conditions (as depicted in the yellow shaded cross-hatched area in Exhibit 2) is significant. Based upon my review of the maps, the usage data, and this additional data, it is my opinion that the service coverage gap is significant.

Exhibit 4 to this Statement is a map that predicts service coverage based on Signal-to-Noise information in the vicinity of the Property if antennas are placed as proposed in the application. As shown by this map, placement of the equipment at the Property closes the significant service coverage gap.

I have a Masters Degree in Electrical Engineering from the University of California (UCLA) and have worked as an engineering expert in the Wireless Communications Industry for over 25 years.

& Spen

Gordon Spencer

May 24, 2011

EXHIBIT 1

AT&T MOBILITY CONDITIONAL USE PERMIT APPLICATION

EXHIBIT 1 Prepared by AT&T Mobility

AT&T's digital wireless technology converts voice or data signals into a stream of digits to allow a single radio channel to carry multiple simultaneous signal transmissions. This technology allows AT&T to offer services such as secured transmissions and enhanced voice, high-speed data, texting, video conferencing, paging and imaging capabilities, as well as voicemail, visual voicemail, call forwarding and call waiting that are unavailable in analog-based systems. With consumers' strong adoption of smart phones, customers now have access to more than 240,000 wireless broadband applications; a number that surely will keep growing as, according to FCC Chairman Julius Genachowski, consumers spent over \$6.2 billion in mobile broadband applications stores in 2010.

AT&T customers are using these applications in a manner that has caused an 8,000% *increase in mobile data usage on AT&T's network over the past four years*. AT&T expects total mobile data volume to *grow 8x-10x over the next five years*. To put this estimate in perspective, all of AT&T Mobility's mobile traffic during 2010 would be equal to only six or seven weeks of mobile traffic volume in 2015.

Mobile devices using AT&T's technology transmit a radio signal to antennas mounted on a tower, pole, building, or other structure. The antenna feeds the signal to electronic devices housed in a small equipment cabinet, or base station. The base station is connected by microwave, fiber optic cable, or ordinary copper telephone wire to the Radio Network Controller, subsequently routing the calls and data throughout the world. The operation of AT&T's wireless network depends upon a network of wireless communications facilities. The range between wireless facilities varies based on a number of factors. The range between AT&T mobile telephones and the antennas in San Francisco, for example, is particularly limited as a result of topographical challenges, blockage from buildings, trees, and other obstructions as well as the limited capacity of existing facilities.

To provide effective, reliable, and uninterrupted service to AT&T customers in their cars, public transportation, home, and office, without interruption or lack of access, coverage must overlap in a grid pattern resembling a honeycomb.

In the event that AT&T is unable to construct or upgrade a wireless communications facility within a specific geographic area, so that each site's coverage reliably overlaps with at least one adjacent facility, AT&T will not be able to provide service consistent with its obligations under its FCC license to the consumers within that area. Some consumers will experience an abrupt loss of service. Others will be unable to obtain reliable service, particularly during periods of high usage.

Consumers may also experience service coverage gaps in situations where coverage overlaps and AT&T's outdoor signal strength is strong. Even in these areas AT&T can experience significant service coverage gaps, especially in its 3G network due to high "noise" level and for vehicular traffic or indoors where more and more users are finding cellular service a necessity. The following paragraphs provide a simplified explanation of why these service coverage gaps exist even though signal strength may appear strong.

AT&T operates a 3G network within the City of San Francisco. 3G means that the mobile telecommunications network can achieve specific benchmark data rates. In AT&T's 3G

2

network, every mobile transmitter shares the same frequency with other mobile transmitters; likewise, every base transmitter shares the same frequency with other base transmitters. Under normal circumstances, this means mobile transmitters would interfere with each other and base transmitters would interfere with other base transmitters. CDMA (code division multiple access) technology used in AT&T's 3G network, however, gives individual receivers the ability to distinguish each transmitter from every other transmitter. Put differently, CDMA is analogous to people speaking the same language being able to communicate and understand each other, but other languages are perceived as noise and rejected. This ability to discriminate based upon different "codes" breaks down, and where it breaks down it create gaps in service coverage, even when the network has been perfectly optimized and signal strength may otherwise appear strong. This problem generally occurs in the following three general scenarios:

Scenario 1: There is a gap in coverage when several transmitters can be received at roughly equal signal levels. This might occur when the receiver is equidistant from multiple transmitters and no one transmitter predominates; this is much more likely to occur, based upon geometry, when the receiver is relatively far from all of the transmitters.

Scenario 2: There is a gap in coverage when many users are utilizing the same cell site transmitter. In this scenario each user generates interference to every other user on the shared channel. In order to minimize this self-generated interference, the users that are furthest from the site are prevented from using the channel. In essence, the coverage from this particular cell shrinks as usage increases.

3

Scenario 3: No signals can reach the receiver at sufficient strength to be decoded. This is the classical signal coverage scenario that plagues all forms of communication and is generally what is indicated when your phone shows zero bars.

Service problems caused by any of the scenarios above can and do occur for customers even in locations where the coverage maps on AT&T's "Coverage Viewer" website appear to indicate that coverage is available. As the legend to the Coverage Viewer maps indicates, these maps depict an *approximation* of coverage; *actual* coverage in an area may differ substantially from map graphics, and may be affected by such things as terrain, foliage, buildings and other construction, motion, customer equipment, and network traffic.

It is also important to note that the signal losses and service problems described above can and do occur for customers even at times when certain other customers in the same vicinity may be able to initiate and complete calls on AT&T's network (or other networks) on their wireless phones. These problems also can and do occur even when certain customers' wireless phones indicate "all bars" of signal strength on the handset.

The bars of signal strength that individual customers can see on their wireless phones are an imprecise and slow-to-update estimate of service quality. In other words, a customer's wireless phone can show "four bars" of signal strength, but that customer can still, at times, be unable to initiate voice calls, complete calls, or download data reliably and without service interruptions. Scenarios 1 and 2 above cause this result.

The reason that raw outdoor signal strength numbers can be an inadequate measurement of wireless service quality (and thus not be reflective of actual "gaps" in wireless service quality) is that these measurements do not reflect the degradation in the quality of the signal as determined by the Signal-to-Noise ratio in the area at various times of day (during periods of greater usage, like in scenario 2 above). While signal strength is an important factor, so is noise, and the more noise that is present in a given vicinity at a particular time of day, the more likely the connections will be unreliable. Signal-to-Noise is a key quality parameter used to determine where service gaps are likely to appear.

To determine where new or upgraded telecommunications facilities need to be located for the provision of reliable service in any area, AT&T's radio frequency engineers rely on far more complete tools and data sources than just signal strength from individual phones. AT&T creates maps incorporating signal <u>and</u> noise information that, in turn, depict existing service coverage and service coverage gaps in a given area.

The service coverage gap is caused in part by a high demand for voice and data service being requested in the coverage area, similar to scenario 2 above, and the insufficient resources to handle the requests; this may be defined as a capacity constraint. The high demand for services causes increased "noise" on each frequency, much like having more individuals all talking at the same time in a room causes more "noise" that makes it harder to hear. In the case of the room full of people analogy, picture a void being created as people crowd closer and closer to each other in order to be able to hear. This natural contraction of crowds of people results in open spaces in the room; if these spaces are partitioned off, then people will have new defined spaces within which they can hold conversations.

During peak usage times, this capacity constraint can degrade the quality of both voice and data services provided to customers in this area, and can reduce services in the pink and yellow shaded cross-hatched areas as shown on the attached map in Exhibit 2. The restriction of the site's service coverage area occurs during high usage periods because, during those times, many users are utilizing the same existing cell site transmitter. In this scenario each user generates interference to every other user on the shared channel. In order to minimize this self-generated interference, the users that are furthest from the existing site are prevented from using the channel. In essence, the coverage from this particular site shrinks as usage increases. As set forth in Exhibit 2, this has caused a significant service coverage gap in AT&T's network.

To rectify this significant gap in its service coverage, AT&T needs to locate a wireless facility in the immediate vicinity of the Property. To continue the analogy above, AT&T must utilize the voids or "gaps" that occur in the crowded room to create new spaces and redistribute the people in the room so that more people can carry on intelligible conversations.

EXHIBIT 2

Proposed Site at 2055 Lombard (CN5537)

Service Area **BEFORE** site is constructed



Current 7-Day Traffic Profile for the Location of CN5537



Current 24-Hour Traffic Profile for the Location of CN5537



EXHIBIT 4

Proposed Site at 2055 Lombard (CN5537)

Service Area AFTER site is constructed



From:		Christina Stout	
То:	R.	sara.vellve@sfgov.org	
Subject:		Fw: 2010.0987CR,2055 Lombard St AT&T mobility	
Date:		03/24/2011 04:35 PM	

----- Original Message -----From: <u>Christina Stout</u> To: <u>vellve@sfplanning.org</u> Sent: Thursday, March 24, 2011 3:13 AM Subject: Fw: 2010.0987CR,2055 Lombard St AT&T mobility

----- Original Message -----From: <u>Christina Stout</u> To: <u>saravellve@sfplanning.gov</u> Sent: Thursday, March 24, 2011 3:10 AM Subject: Fw: 2010.0987CR,2055 Lombard St AT&T mobility

----- Original Message -----From: <u>Christina Stout</u> To: <u>saravellve@sfplanning.org</u> Sent: Wednesday, March 23, 2011 4:52 AM Subject: Fw: 2010.0987CR,2055 Lombard St AT&T mobility

----- Original Message -----From: <u>Christina Stout</u> To: <u>saravellve@sf.gov</u> Sent: Wednesday, March 23, 2011 4:35 AM Subject: Fw: 2010.0987CR,2055 Lombard St AT&T mobility

2nd try----- Original Message -----

From: Christina Stout

To: sarahvellve@sfgov.org

Sent: Wednesday, March 23, 2011 4:14 AM Subject: 2010.0987CR,2055 Lombard St AT&T mobility To Whom It May Concern:

I am a resident of Cow Hollow, I live on 2085 Greenwich St., near the proposed area for the antenna site. There was an article today in CNN on the World Health Organization's releasing their position that cell phone radiation can cause cancer, this only further enforces my feelings. I ABSOLUTELY 100% DO NOT WANT THESE ANTENNAS NEAR ME. I EXPECT MY REPRESENTATIVES TO REPRESENT THE INTEREST OF THE RESIDENTS IN THIS CASE AND *DENY* AT&T. Every neighbor I have talked to feels the same way about this. Yes, I am afraid of the unknown effects of these antennas, and am glad to be so. If there is a radiation/cancer link it will only come out 15 years later, and what will they say... "Sorry"!?!?! Screw that. Let them place their antennas in NON-RESIDENTIAL AREAS!!!

Thanks Ron Itelman



May 9, 2011

Sara Vellve, Planner San Francisco Department of Planning 1660 Mission Street, 5th Floor San Francisco, CA 94103

Re: Case No. 2010.0987C AT&T Facility 2055 Lombard Street – Response to Community Comments

Dear Sara,

This letter is in response to the email you provided to Erin Whitney, KDI on April 28, 2011 which included correspondence you received from community member Christina Stout on March 23, 2001. Below is a list of the comments/questions Ms. Stout presented along with the additional follow-up questions you had and our responses to both.

Christina Stout Comment #1:

Other locations were not considered as the garage location filled a gap in the grid and thus reception. Three of the antennas will be placed in clusters and will face a specific direction completing a triangle pointing toward the school, a cluster toward Van Ness Ave. and another cluster toward the Golden Gate Bridge. Once placed there, other telephone companies will increase their interest and it will extend the "farm".

Sara Vellve Follow-up Question to Comment #1:

The application indicates that a number of other sites were considered for the project. Was information pertaining to the alternative site analysis discussed @ the meeting?

KDI Response to Comment #1:

During the community meeting a question was raised regarding if any additional locations were evaluated by AT&T. In response AT&T briefly outlined the locations of each alternative location considered as specified in the application including 3228 Steiner Street, 2150 Lombard Street, 2141 Chestnut Street, and 2110 Greenwich Street. However, the Proposed Location at 2055 Lombard Street was selected as the primary candidate due to its ability to meet the defined service objective and its consideration as Preference 1 Location, the most preferred location according to the WTS Guidelines.

Christina Stout Comment #2:

Individuals in the meeting expressed major concerns for microwave radiation affects on young, growing and developing children attending the school. Several thoughts came to mind: how much radiation, if any, is safe, affects long-term, affects on children who are challenged, have illnesses, and those who are healthy, etc.

KDI Response to Comment #2:

As part of the community meeting, Bill Hammett, a radio frequency engineer with Hammett & Edison, Inc. was also in attendance to answer any questions related to electromagnetic frequency (EMF) emissions. Mr. Hammett explained the FCC standards for emission and confirmed that the Proposed Facility complies with those standards. The discussion continued with a series of questions and answers related to EMF between the community members and Mr. Hammett.

Christina Stout Comment #3:

Owners were concerned about reduction in their property values and accompanying obstruction of views (one of the reasons for buying expensive Marina properties).

KDI Response to Comment #3:

One community member indicated that he lived on the south side of the Proposed Location and was concerned that the installation would obstruct his view. In response we discussed the design and the dimension of the proposed extension. His concerns were noted.

Christina Stout Comment #4:

Although the antennas would be covered with a fence style arrangement, radiation levels will emit through wood and cement 24 hours a day, 7 days a week permanently. No documents could be passed out to attendees of the amount of radiation emitted.

Sara Vellve Follow-up Question to Comment #4:

Were the H&E and DPH reports made available at the meeting?

KDI Response to Comment #4:

AT&T provides a copy of the submitted Conditional Use application for review during the community meeting. The Radio Frequency (RF) report prepared by Hammett & Edison and subsequent approval of the RF report provided by the San Francisco Department of Public Health are included with a copy of the Conditional Use application. Additional copies of the service maps, EMF report, the Department of Public Health approval and other handouts are not supplied during the meeting. However, as a matter or practice, if a community member requests any document provided as part of the Conditional Use application, AT&T offers one to be mailed to them (via email or postal service). In this particular case, it was suggested that those who were interested provide their e-mail address on the Sign-Up Sheet. The sign up sheet shows that 2 members of the community requested additional documentation. Unfortunately there was an oversight and the information was provided via email on 5/6 to those community members listed on the Sign-up Sheet. The following information was provided:

1. EMF report prepared by Hammett & Edison

2. DPH Approval

3. Service Maps

Christina Stout Comment #5:

A coverage map was requested. Other smaller antenna locations are nearby; one will be dismantled and incorporated in the groupings on the Lombard St. garage. Every 3-4 block

quadrants are included in a 5-year plan and will house additional antennas.

Sara Vellve Follow-up Question #5:

Were the coverage maps available at the meeting?

KDI Response to Comment #5:

See response to Question #4 above.

Christina Stout Comment #6:

Studies were requested. Also, what methodology was used to determine "gap"!

KDI Response to Comment #6:

It is not clear on what studies this comment is referring to other than the EMF report. It appears that the second part of the question is referring to the methodology behind the AT&T Network RF Engineers determining when there is a "gap" in service. The following response is given: The AT&T Network RF Engineers use several different ways to determine where additional service is required. Such tools are drive test data, customer complaints, smart phone applications such as 'mark the spot', network statistics on drop calls and AT&T switch data.

Christina Stout Comment #7:

Any temporary or permanent resident with 500' will be impacted.

KDI Response to Comment #7:

I believe this comment may be in reference to the discussion of the difference in community notification during the processing of Conditional Use applications for wireless telecommunication facilities. Specifically it was explained that the Community Outreach Meeting notification radius is 500' and the Planning Commission notification radius is 300' as required by the San Francisco Planning Department.

Christina Stout Comment #8:

Two members of our team will be available for parents to sign a petition on Monday, January 31st indicating that you do not want the antennas placed on top of the garage. This petition will be presented to the Board of Supervisors (need 150-160 signatures in the affected neighborhood). AT&T or their agent has already contacted the school.

KDI Response to Comment #8:

As of the date of the community meeting, AT&T had not contacted the school (Tule Elk Park Center). However, since that time AT&T has attempted to make contact. As of the date of this letter, no response has been received.

Christina Stout Comment #9:

AT&T will lease the garage parking spaces from the City and County of San Francisco; Lombard Street has no other publicly own building and was chosen for that reason. Leasing cost estimates of \$15,000 and above will be paid monthly to the CCSF.

KDI Response to Comment #9:

The Proposed Location was determined to be the primary candidate within the defined search area for its ability to meet the defined service objective and its consideration as a Preference 1 Location, the most preferred, according to the WTS Guidelines. Details of the lease were not available or addressed during the community meeting as that information is not yet public information.

Christina Stout Comment #10:

Please let us know if you have another location suggestion and we will included it in our presentation or if you would like to attend the Board of Supervisors Meeting or the Planning Commission meetings when scheduled. Contact: Christina Stout (415) 922-5602 or Frances Gouveia (885-3317)."

It should be noted that the meeting was held on the very day of the President Obama's State of the Union Message; a National basketball game was held and televised; it rained that evening; and some who wanted to attend had prior meeting commitments that couldn't be changed. AT&T representatives have said NO to another scheduled community meeting. To date (March 23rd) we have received NONE of the above requested materials. An AT&T representative stated at the January 25th meeting that the reason for it being held January 25th - was to "avoid the holidays".

Sara Vellve Follow-up Question to Comment #10:

Did the community request additional information at the meeting and was it provided?

KDI Response to Comment #10: In general the community meetings are scheduled roughly a month to a month and half in advance to allow for preparation of the notification materials. The Conditional Use application was submitted on November 2, 2010 and AT&T did delay the community outreach meeting until after the holidays. The meeting was not intentionally scheduled during any special events. As mentioned previously, the fact that the additional materials were not provided was an oversight and was provided via email on 5/6/11.

Christina Stout Comment #11:

At that same meeting, the actual number of antennas to be placed on top of the garage at 2055 Lombard St. was less than we learned at a later date.

Also: 27 disks (three on each pole, three-pole clusters) can be adjusted and lowered to direct EMF radiation so that travelers using Highway 101 Lombard St. corridor going to and from Marin County will not have "dropped calls" (while driving) vs the permanent affects on our neighborhood.

Sara Vellve Follow-up Question to Comment #11:

Can you tell me about the 27 disks? I'm not sure what they are referring to.

KDI Response to Comment #11:

I am unable to verify the reference to the '27 disks'. There are no "disks" on the proposed AT&T facility.

Christina Stout Comment #12:

As seen by the number of gathered signatures, the neighborhood does NOT want these 9 - 7' powerful antennas with 27 large disks, plus 6 supportive refrigerator size equipment cabinets, on top of the garage above the Post Office covering a circumference of 500' (previous telephone companies stated 300'), obstructing views, reducing property values, and damaging the cellular structure of at risk children, seniors, and neighbors.

KDI Response to Comment #12:

The proposed project consists of the installation of nine (9) panel antennas measuring approximately 48-3" tall placed within a new seven (7) foot tall extension to an existing penthouse and (6) associated radio cabinets within an enclosure. There are no 'disks' associated with the proposed project. The proposed service area is not delineated by a circumference measured in feet so it is unclear where this measurement was obtained. However the way in which the service area is defined is by a geographic area which is roughly bounded by Chestnut, Pixley, Steiner and Buchanan Streets.

Please let me know if you have any additional questions regarding the information provide.

Sincerely, murhille

Amy Million KDI representing AT&T Mobility amy@kdiplanning.com



As a business operator along the Lombard Street corridor, I support AT&T's efforts to improve wireless coverage in San Francisco with a new wireless communication facility at 2055 Lombard Street. Please vote in support of improved wireless service in San Francisco.

Address Email Name **Business** a Jouden Albertino Market 1897 Lomband St. Krovemy Doorman Proporty Mng). 1881 Kombard SJ. Mickedoorman SF.com Lombard St. Stell jødanice. manuel edwa Manuel 00 875 edward Lombord S.F. Drawn Mascare ; Wellness Milstein 1241 JOF DUUG CAWLEY FASTFRAME 1700 LUMBARD ST SF douglasf cowley a comeastinet JACKSON 1926 Lombard Mr. Pickles

I understand AT&T will keep a copy of this petition, and I agree to receive updates regarding AT&T's wireless initiatives.



As a business operator along the Lombard Street corridor, I support AT&T's efforts to improve wireless coverage in San Francisco with a new wireless communication facility at 2055 Lombard Street. Please vote in support of improved wireless service in San Francisco.

Name	Business	Address	Email
JULIAN	Unite Patris	3318 Fillmore	julia white @ patrispizza.com
Chase	Clerke, A Child	's Delight 3301 Fillmore	achildsdelight.sf@gmail.com
			The stationery guy Egghus. Com
A. No. Cast		2398 LOMBARD STREET	MARINADISTRICT @ SHOESNFEET.COM
ZhiQuan W	K Fergahinik	estamon 2346 Lombard S	t. From Wu688 @ Jahoo Com
Cluel Tos	\mathbf{V}	TTRP. 23-12 Combar 8	

I understand AT&T will keep a copy of this petition, and I agree to receive updates regarding AT&T's wireless initiatives.



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Name	Busine	255	Address	Email
Manisa	Ginudo	City Clothing	3251 Pierce St.	City clothings f-Q
Meak	Uuillams	plane Laya	R 2209 Chestrut	neg@mecheleyer.com
Chustin	respiration	penefit	219 Augtnut.	Onelwer Stor. edy
$ \Lambda $	n Chee	· •	which 2733 chatric	+
RICH 1	NCLOTEM	BOOKSINC.	2251 CHESMUT	RCICCOTEM O BOURSINC.
4p. h		dress	2271 CHESTNUT	dress. buying @ ginal.com

I understand AT&T will keep a copy of this petition, and I agree to receive updates regarding AT&T's wireless initiatives.

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Name	Business WALNUT CLORM	Address Art	Email
Freeman	= 2266 CH1557mm7	2266 cf1857nm7	N/A-
Henry Lowa	y ecosoray	2146 Chartmant	NLA
Marine Hansan	Fire Skirts	2124 Chestnut	
DOPA Olivar	ES Janie & Jack	2108 CHESTINIST	NA
Laura Nels	ion Laline	2606 Chestnut SI	

I understand AT&T will keep a copy of this petition, and I agree to receive updates regarding AT&T's wireless initiatives.



Dear Supervisor Chiu and Planning Commission,

As a business operator along the Lower Nob Hill/Polk Street corridor, I support AT&T's efforts to improve wireless coverage in San Francisco with a new wireless communication facility at 897-899 Hyde Street. Please vote in support of improved wireless service in San Francisco.

Name	Business	Address	Email
Teal	Alamiz Goldon Ga	a Jerp 1101 Juster St. San train	cisto Ct-
Jasin	ATTIA JERUSale	In MARK 1100 SUHER S-C	Ca
Jan 1	ar Peña 1167 S	Suffer St. Son Francisco	94109
IZ4	T 1216 pc,	11 ST SF-CA	94109
Dongquei 2	i internetion of beau	of College 1224 POIKST S.F. C.A. 9	4109
	Quintana Queta		
	(

I understand AT&T will keep a copy of this petition, and I agree to receive updates regarding AT&T's wireless initiatives.


As a business operator along the Lower Nob Hill/Polk Street corridor, I support AT&T's efforts to improve wireless coverage in San Francisco with a new wireless communication facility at 897-899 Hyde Street. Please vote in support of improved wireless service in San Francisco.

Name	Business	Address	Em	ail
RONI	WILLIS VIAV	MEDIA 780 Sattle	RST. SF RONU	ILLISQUIAMEDIA, NET
Car	la Stacho	Candy Darling	798 Suffer SF G	rlac stuchofamily.c
GEOF	FWINSton	Sportigut St	808 Sutter ST	SSF Geoff @ gma
¥E)	MARMAN	SPOLE ART	816 SUTTER 57	SPOKEMET GALLERY & GMALL
DANIEL	Arour	P.B.M	882 Sutter St.	······
	DADIT	CURASOL	896 Sutter	57- i.dAbit@gmain
Tundanatand				, Com



As a business operator along the Lower Nob Hill/Polk Street corridor, I support AT&T's efforts to improve wireless coverage in San Francisco with a new wireless communication facility at 897-899 Hyde Street. Please vote in support of improved wireless service in San Francisco.

Name	Business	Address	Email
CBARE	2 2 CONT NENTR	1546 DOLKST	NC
20	RiJoh. Shop	154 POLKE St.	
MUNir	ROYAL LIBOURS	1400 Polk-st	



As a business operator along the Lower Nob Hill/Polk Street corridor, I support AT&T's efforts to improve wireless coverage in San Francisco with a new wireless communication facility at 897-899 Hyde Street. Please vote in support of improved wireless service in San Francisco.

Name	Business	Address	Email
ISSAM *	Town country MK+	600 post st	
	2 Mide Page Style Ja		
Ű	bell Bloom Spa		
STEVE G	adattelthett Foot	- LIQUOR WORLD 728	Past St.
		Alling 750. Postst SF,	
Francing Of	766 7651	7 ST (Mack's Dry	(Covers)



As a business operator along the Lower Nob Hill/Polk Street corridor, I support AT&T's efforts to improve wireless coverage in San Francisco with a new wireless communication facility at 897-899 Hyde Street. Please vote in support of improved wireless service in San Francisco.

Name	Business	Address	Email
Mandy	linville cleaners	270 Past st.	
MAT	MATOCKERN	E 864 Post	
Wes	Fra House of	FarsInc 894 Post.	St
	in Hural De	signer 963 HYDE	ST
Ray E		ze cleaners 1018 Hyp	le St.
winni		+ DONUT 1026 1	



As a business operator along the Lower Nob Hill/Polk Street corridor, I support AT&T's efforts to improve wireless coverage in San Francisco with a new wireless communication facility at 897-899 Hyde Street. Please vote in support of improved wireless service in San Francisco.

Name	Business	Address	Email
+PISH	GUAN SALDA F	HUX IDAZ HYDE IST S	SF 94109 -PRSHKNUSSKOIRENCHONILCOM
HAMELITA +	ALCANTHORA HAIR	0/CLASS 1987 CAL. ST	94109
ENBYC	AUTON NOB	Hu Florass 1396 CALLES	5 9429
Dere	ice Holbert	Costadel Sol Tanning	1426 Coliforia & SF 94/09
R05,	AN ROSAN	FAMION 1468 califor	na, st SF. rA 94104
KATIE	Yn CORDON	VBLEG 1574 CALIZO	RN1457.57. G9410P
		this natition and I agree to receive undates	regarding AT&T's wireless initiatives



As a business operator along the Lower Nob Hill/Polk Street corridor, I support AT&T's efforts to improve wireless coverage in San Francisco with a new wireless communication facility at 897-899 Hyde Street. Please vote in support of improved wireless service in San Francisco.

Name	Business	Address	Email
Amie	Deviespa	14B Polk St.	
DAVID WEE	not falls Boo	« STARE MIG PORK	
Hon.	Borcelona	1401 POIK	
n	Utsawa Archa 11	1339 Polk.	
Hutapla Atena. 1	Arho UL	1303 pol K	14 fo @ Aich= SF. com
Noto	nie leftover	5 1259 POIK	



As a business operator along the Lower Nob Hill/Polk Street corridor, I support AT&T's efforts to improve wireless coverage in San Francisco with a new wireless communication facility at 897-899 Hyde Street. Please vote in support of improved wireless service in San Francisco.

Name	Business	Address	Email
Sami Santin	. Lush Lounge	izzi Poik St.	Sami Santini@gmail. Com
WARDON TRUNA		1203 POLE St.	WALLERNTKINION & HOTHERL. COM
<u>, , , , , , , , , , , , , , , , , , , </u>			
	····		



SAN FRANCISCO PLANNING DEPARTMENT

Planning Department 1650 Mission Street Suite 400 San Francisco, CA 94103-9425

T: 415.558.6378 F: 415.558.6409

DECLARATION OF INTENT FOR Wireless Telecommunications Facility Section 106 Review

A Section 106 evaluation is required for all new WTS facilities proposed on any structure 45 years of age and older, within 250 feet of an eligible historic district, or a significant alteration to an existing site. Complying with Section 106 of the National Historic Preservation Act (NHPA) is a statutory obligation that is separate and distinct from complying with the National Environmental Policy Act (NEPA). For more information, please visit the California Office of Historic Preservation web site, http://ohp.parks.ca.gov/?page_id=22327.

You must submit this affidavit along with the Wireless Telecommunications Facility checklist to the Planning Department.

Declaration of Intent for S	ection 106 Review
I, Jennifer Estes	, do hereby declare as follows:
a. The subject Wireless Telecommunications Facili <u>2055 LOMBARD</u> STRE Address	
 b. I am aware that, according to Section 106 of the new WTS facilities proposed on any structure 42 of an eligible historic district, or a significant alto comply with all said requirements. c. I am a duly authorized officer or owner of the surface of the su	5 years of age and older, within 250 feet eration to an existing site; and intend to
l declare under penalty of perjury under the laws of true and correct.	the State of California that the foregoing is
Executed on this day, NOVEMBER	2, 2010, in
430 Bush St., San Francisco CA	
Jennifer Estes, Project Manager	Free Smem Mability
Name (Print), Tile 415.774.1248	TOT AT&T MODILITY
Contact Phone Number	

www.sfplanning.org

Statement of Hammett & Edison, Inc., Consulting Engineers

The firm of Hammett & Edison, Inc., Consulting Engineers, has been retained on behalf of AT&T Mobility, a personal wireless telecommunications carrier, to evaluate the base station (Site No. CN5537) proposed to be located at 2055 Lombard Street in San Francisco, California, for compliance with appropriate guidelines limiting human exposure to radio frequency ("RF") electromagnetic fields.

Background

The San Francisco Department of Public Health has adopted a 10-point checklist for determining compliance of proposed WTS facilities or proposed modifications to such facilities with prevailing safety standards. The acceptable limits set by the FCC for exposures of unlimited duration are:

Wireless Service	Frequency Band	Occupational Limit	Public Limit
Microwave (Point-to-Point)	5-80,000 MHz	5.00 mW/cm^2	1.00 mW/cm^2
BRS (Broadband Radio)	2,600	5.00	1.00
AWS (Advanced Wireless)	2,100	5.00	1.00
PCS (Personal Communication)	1,950	5.00	1.00
Cellular	870	2.90	0.58
SMR (Specialized Mobile Radio)	855	2.85	0.57
700 MHz	700	2.35	0.47
[most restrictive frequency range]	30-300	1.00	0.20

The site was visited by the undersigned engineer during normal business hours on April 9, 2010, a non-holiday weekday, and reference has been made to information provided by AT&T, including zoning drawings by Streamline Engineering and Design, Inc, dated October 9, 2010.

Checklist

1. The location of all existing antennas and facilities at site. Existing RF levels.

There were observed no wireless base stations installed at the site. Existing RF levels at ground level near the site were less than 1% of the most restrictive public exposure limit.

2. <u>The location of all approved (but not installed) antennas and facilities.</u> <u>Expected RF levels from approved antennas.</u>

No other WTS facilities are reported to be approved for this site but not installed.

3. <u>The number and types of WTS within 100 feet of proposed site and estimates of additive EMR</u> <u>emissions at proposed site.</u>

T-Mobile has installed similar antennas in a commercial sign in front of a restaurant located across Lombard Street, about 100 feet away.

4. <u>Location (and number) of Applicant's antennas and back-up facilities per building and location</u> (and number) of other WTS at site.

AT&T proposes to install nine Andrew Model DBXNH-6565A-R2M directional panel antennas behind new view screens to be installed on the sides of the elevator penthouse above the top level of the five-story parking garage located at 2055 Lombard Street in San Francisco. The antennas would be mounted with up to 8° downtilt at an effective height of about 56 feet above ground, 17½ feet above the top level of the parking garage, and would be oriented in groups of three at about 120° spacing, to provide service in all directions.

5. <u>Power rating (maximum and expected operating power) for all existing an proposed backup equipment subject to application.</u>

The expected operating power of the AT&T transmitters is reflected in the resulting effective radiated power given in Item 6 below; the transmitters may operate at a power below their maximum rating.

6. Total number of watts per installation and total number of watts for all installations at site.

The maximum effective radiated power proposed by AT&T in any direction is 6,250 watts, representing simultaneous operation at 1,750 watts for AWS, 2,170 watts for PCS, 1,580 watts for cellular, and 750 watts for 700 MHz.

7. <u>Plot or roof plan showing method of attachment of antennas, directionality of antennas, and height</u> <u>above roof level. Discuss nearby inhabited buildings.</u>

The drawings show the proposed antennas to be installed as described in Item 4 above. There were noted no buildings of similar height nearby.

8. <u>Estimated ambient RF levels for proposed site and identify three-dimensional perimeter where exposure standards are exceeded.</u>

For a person anywhere at ground, the maximum ambient RF exposure level due to the proposed AT&T operation is calculated to be 0.023 mW/cm^2 , which is 2.9% of the applicable public exposure limit. Ambient RF levels at the site are therefore estimated to be below 4% of the limit. The three-dimensional perimeter of RF levels equal to the public exposure limit is calculated to extend up to 53 feet out from the antenna faces; this does not reach the top floor of the garage or any other publicly accessible areas.

9. Describe proposed signage at site.

Due to their mounting locations, the AT&T antennas would not be accessible to the general public, and so no mitigation measures are necessary to comply with the FCC public exposure guidelines. To prevent occupational exposures in excess of the FCC guidelines, no access within 18 feet directly in front of the antennas themselves, such as might occur during maintenance work on the outside of the elevator penthouse, should be allowed while the base station is in operation, unless other measures can

HAMMETT & EDISON, INC. CONSULTING ENGINEERS SAN FRANCISCO

E3V3 Page 2 of 3

be demonstrated to ensure that occupational protection requirements are met. Posting explanatory warning signs^{*} on the screens in front of the antennas, such that the signs would be readily visible from any angle of approach to persons who might need to work within that distance, would be sufficient to meet FCC-adopted guidelines.

10. Statement of authorship.

The undersigned author of this statement is a qualified Professional Engineer, holding California Registration Nos. E-13026 and M-20676, which expire on June 30, 2011. This work has been carried out under his direction, and all statements are true and correct of his own knowledge except, where noted, when data has been supplied by others, which data he believes to be correct.

Conclusion

Based on the information and analysis above, it is the my professional opinion that the operation of the base station proposed by AT&T Mobility at 2055 Lombard Street in San Francisco, California, will comply with the prevailing standards for limiting public exposure to radio frequency energy and, therefore, will not for this reason cause a significant impact on the environment. The highest calculated level in publicly accessible areas is much less than the prevailing standards allow for exposures of unlimited duration. This finding is consistent with measurements of actual exposure conditions taken at other operating base stations. Posting of explanatory signs is recommended to establish compliance with occupational exposure limitations.

OFESS/ E-13026 William F. Hammett, P.E. M-20676 5 707/996-5200 6-30-2011

March 18, 2011

HAMMETT & EDISON, INC. CONSULTING ENGINEERS SAN FRANCISCO

E3V3 Page 3 of 3

^{*} Warning signs should comply with OET-65 color, symbol, and content recommendations. Contact information should be provided (*e.g.*, a telephone number) to arrange for access to restricted areas. The selection of language(s) is not an engineering matter; the San Francisco Department of Public Health recommends that all signs be written in English, Spanish, and Chinese.



City and County of San Francisco DEPARTMENT OF PUBLIC HEALTH ENVIRONMENTAL HEALTH SECTION

Edwin M. Lee, Mayor Barbara A. Garcia, MPA, Director of Health Raiiv Bhatia, MD, MPH, Director of EH

Review of Cellular Antenna Site Proposals

Project Sponsor : AT&T	Vireless Planner:	Jonas Ionin	
RF Engineer Consultant:	Hammett and Engineering	Phone Number:	(707) 996-5200
Project Address/Location:	2055 Lombard St		
Site ID: 1344	SiteNo.: CN5537		_

The following information is required to be provided before approval of this project can be made. These information requirements are established in the San Francisco Planning Department Wireless Telecommunications Services Facility Siting Guidelines dated August 1996. In order to facilitate quicker approval of this project, it is recommended that the project sponsor review

this document before submitting the proposal to ensure that all requirements are included.

X 1. The location of all existing antennas and facilities. Existing RF levels. (WTS-FSG, Section 11, 2b)

2. The location of all approved (but not installed) antennas and facilities. Expected RF levels from the approved antennas. (WTS-FSG Section 11, 2b)

⊖ Yes ● No

3. The number and types of WTS within 100 feet of the proposed site and provide estimates of cumulative EMR emissions at the proposed site. (WTS-FSG, Section 10.5.2)

○ Yes ● No

X 4. Location (and number) of the Applicant's antennas and back-up facilities per building and number and location of other telecommunication facilities on the property (WTS-FSG, Section 10.4.1a)

5. Power rating (maximum and expected operating power) for all existing and proposed backup equipment subject to the application (WTS-FSG, Section 10.4.1c)

Maximum Power Rating: 6250 watts.

X 6. The total number of watts per installation and the total number of watts for all installations on the building (roof or side) (WTS-FSG, Section 10.5.1).

Maximum Effective Radiant: 6250 watts.

7. Preferred method of attachment of proposed antenna (roof, wall mounted, monopole) with plot or roof plan. Show directionality of antennas. Indicate height above roof level. Discuss nearby inhabited buildings (particularly in direction of antennas) (WTS-FSG, Section 10.41d)

8. Report estimated ambient radio frequency fields for the proposed site (identify the three-dimensional perimeter where the FCC standards are exceeded.) (WTS-FSG, Section 10.5) State FCC standard utilized and power density exposure level (i.e. 1986 NCRP, 200 µw/cm²)

Maximum RF Exposure: 0.023 mW/cm² Maximum RF Exposure Percent: 2.9

9. Signage at the facility identifying all WTS equipment and safety precautions for people nearing the equipment as may be required by any applicable FCC-adopted standards. (WTS-FSG, Section 10.9.2). Discuss signage for those who speak languages other than English.

Public_Exclusion_Area	Public Exclusion In Feet:	53
Occupational_Exclusion_Area	Occupational Exclusion In Feet:	18

- **X** 10. Statement on who produced this report and qualifications.
- XApproved. Based on the information provided the following staff believes that the project proposal will
comply with the current Federal Communication Commission safety standards for radiofrequency
radiation exposure. FCC standard 1986-NCRP _____Approval of the subsequent Project
Implementation Report is based on project sponsor completing recommendations by project
consultant and DPH.

Comments:

There are currently no existing antennas operated by AT&T Wireless installed on the elevator penthouse of the building at 2055 Lombard Street. Exisiting RF levels at ground level were around 1% of the FCC public exposure limit. There were observed no other antennas within 100 feet of this site. AT&T Wireless proposes to install 9 new antennas. The antennas are mounted at a height of 56 feet above the ground. The estimated ambient RF field from the proposed AT&T Wireless transmitters at ground level is calculated to be 0.023 mW/sq cm., which is 2.9 % of the FCC public exposure limit. The three dimensional perimeter of RF levels equal to the public exposure limit extends 53 feet which does not reach the top floor of the garage and does not reach any publicly accessible areas. Warning signs must be posted at the antennas and roof access points in English, Spanish and Chinese. Worker should not have access to within 18 feet of the front of the antennas while they are in operation.

Not Approved, additional information required.

Not Approved, does not comply with Federal Communication Commission safety standards for – radiofrequency radiation exposure. FCC Standard

¹ Hours spent reviewing

Charges to Project Sponsor (in addition to previous charges, to be received at time of receipt by SI

il Fosdell

Dated: 4/13/2011

-Patrick Fosdahl

Signed:

Environmental Health Management Section San Francisco Dept. of Public Health 1390 Market St., Suite 210, San Francisco, CA. 94102 (415) 252-3904

NOTICE OF NEIGHBORHOOD MEETING

To: Community Groups, Neighbors & Owners within 500' radius of 2055 Lombard Street

Meeting Inf	formation	AT&T Mobility is proposing a wireless communication facility at 2055 Lombard
Date:	January 25, 2011	Street (parking garage) needed by AT&T Mobility as part of its San Francisco
Time:	7:00 p.m.	wireless network. The proposed AT&T Mobility site is an unmanned facility
Where:	La Barca	consisting of the installation of nine (9) panel antennas within an extension to an
	2036 Lombard Street	existing elevator penthouse. The antennas will be placed behind a new screen wall on
	San Francisco, CA 94123	top of the existing penthouse so that they are not visible to the public. The new
		screen wall will be painted and textured to match the existing penthouse. The
Site Inform	ation	associated equipment would be located on the roof. Plans and photo simulations will
Address:	2055 Lombard Street	be available for your review at the meeting. You are invited to attend a community
	Block/Lot 0509/009	informational meeting located at La Barca, 2036 Lombard Street on January 25, 2011
	Zoning: P - Public	at 7:00 p.m. to learn more about the project.
Applicant		If you have any questions regarding the proposal and are unable to attend the
AT&T Mob	ility	meeting, please contact the AT&T Mobility Hotline at (415) 646-0972 and an AT&T
		Mobility specialist will return your call. Please contact the City of San Francisco
Contact Inf	formation	Planning Department at (415) 558-6377 if you have any questions regarding the
AT&T Mob	ility Hotline	planning process.
(415) 646-0	972	
		NOTE: If you require an interpreter to be present at the meeting, please contact our office at (415) 646-0972 no later than 5:00pm on Friday January 21, 2011 and we will make every effort to provide you with an interpreter.

NOTIFICACIÓN DE REUNIÓN DE VECINDARIO

Para: Grupos comunitarios, vecinos y propietarios dentro de un radio de 500' de 2055 Lombard Street

Informació	n de la reunión
Fecha:	25 de enero de 2011

Hora:	7:00 p.m.
Dónde:	La Barca 2036 Lombard Street
	San Francisco, CA 94123

Información del lugar

Dirección: 2055 Lombard Street Cuadra/Lote 0509/009 Zonificación: P - Pública

Solicitante AT&T Mobility

Información de contacto Línea directa de AT&T Mobility (415) 646-0972 AT&T Mobility propone instalar una instalación de comunicaciones inalámbricas en 2055 Lombard Street (aparcamiento) como parte de su red inalámbrica en San Francisco. La ubicación propuesta por AT&T Mobility es una instalación sin personal que consiste en la instalación de nueve (9) antenas panel ubicadas en una extensión del cuarto de máquinas de un elevador existente. Las antenas se colocarán detrás de una mampara nueva sobre el cuarto de máquinas para que no se vean. La mampara nueva se pintará y texturará para que combine con el cuarto de máquinas. Los equipos relacionados se colocarán en el techo. Habrá planos y fotos disponibles para que usted los revise en la reunión. Lo invitamos a asistir a una reunión informativa de la comunidad que se realizará en La Barca, 2036 Lombard Street, el 25 de enero de 2011 a las 7:00 p.m. para tener más información sobre el proyecto.

Si tiene preguntas relacionadas con la propuesta y no puede asistir a la reunión, por favor, llame a la Línea Directa de AT&T Mobility, (415) 646-0972, y un especialista de AT&T Mobility le devolverá el llamado. Por favor, contacte al Departamento de Planificación de la Ciudad de San Francisco al (415) 558-6377 si tiene alguna pregunta relaciona da con el proceso de planificación.

NOTA: Si necesita que un intérprete esté presente en la reunión, por favor, contacte a nuestra oficina al (415) 646-0972 el viernes 21 de enero antes de las 5:00 p.m., y haremos todos lo posible para proporcionarle un intérprete.

社區會議通知

致: Lombard 街 2055 號周圍五百英尺內的社區組織、居民和業主

會議資訊	AT&T Mobility 公司計畫在 Lombard 街 2055 號(停車場)建造一座無線通訊設
日期: 2011年1月25日	施,作為 AT&T Mobility 公司在三藩市無線網路的一部分。計畫中的 AT&T
時間: 下午 7:00	Mobility 設施無需人工作業,整個工程需要安裝九 (9) 根平板天線,這些天線
地點: 加利福尼亞州三藩市	將被放置在現有電梯閣樓的延伸區域。這些天線將被放在現有閣樓屋頂上一道
Lombard 街 2036 號 La Barca (郵編 94123)	新建造的圍牆後面,公眾從外面看不到這些天線。這道新圍牆的粉刷和構造將
設施地點資訊	與現有的閣樓保持一致。相關的設備將被放置在樓頂上。我們在會上將提供計
地址: Lombard 街 2055 號	畫書和類比圖片供您參考。我們誠意邀請您參加定於 2011 年 月 25 日下午
街區 / 地段:0509/009	7:00 在 Lombard 街 2036 號 La Barca 召開的社區通氣會,以便您瞭解有關本專
分區:P - Public	案的更多資訊。
申請公司	↓ 如果您對該計畫有任何疑問,但是無法出席這次會議,請撥打AT&T Mobility
AT&T Mobility	公司熱線電話(415) 646-0972,AT&T Mobility公司的專業人員將會回復您的電
聯繫資訊	┃ ┃話。如果您對本規劃程式有任何疑問,請致電 (415) 558-6377 與三藩市規劃署
AT&T Mobility公司熱線電話	聯繫。
(415) 646-0972	
	注意:如果您需要一名翻譯陪同您出席會議,請在不晚於 2011 年 1 月 21 日下午
	5 點前致電 (415) 646-0972 與本辦公室聯繫,我們將盡力為您配備一名翻譯。

Sara Vellve, Planner San Francisco Department of City Planning 1650 Mission Street, 5th Floor

San Francisco, CA 94103

RE: 2010.0987CR, 2055 Lombard Street 9AT&T mobility)

Dear Ms. Vellve:

We attended the January 25, 2011 meeting at the La Barca Restaurant held by representative Erin Whitney, KDI Planning, representing AT&T Mobility and Christina Stout (knowing shorthand) took minutes of that meeting. A copy of the letter sent to you by Ms. Whitney states the primary concern "was the perceived EMF emissions that the proposed facility would have". For your information, we currently have over 300 signatures AGAINST the proposed above subject site and can present them to you upon request. Following are the actual minutes taken at the meeting and distributed to the neighborhood while gathering signatures:

"RESIDENTS, BUSINESSES,

CITIZENS	JANUARY
27, 2011	

"AT&T and it's representatives held a community meeting at 7:00 p.m. in the La Barca Restaurant on January 25, 2011 to discuss nine 7' antennas emitting microwave radiation be placed on the top of the garage next to The Tule Elk School and above the Lombard St. Post Office.

"Proposed plans have already been filed with the Department of Health and the San Francisco Planning Department prior to the meeting on January 25th. These plans were known as far back as the first week in November 2010. Three months have passed before the community input meeting occurred on Tuesday, January 25, 2011.

"Following are some of the items discussed at this meeting:

"1. Other locations were not considered as the garage location filled a gap in the grid and thus reception. Three of the antennas will be placed in clusters and will face a specific direction completing a triangle pointing toward the school, a cluster toward Van Ness Ave. and another cluster toward the Golden Gate Bridge. Once placed there, other telephone companies will increase their interest and it will extend the

"farm".

"2. Individuals in the meeting expressed major concerns for microwave radiation affects on young, growing and developing children attending the school. Several thoughts came to mind: how much radiation, if any, is safe, affects long-term, affects on children who are challenged, have illnesses, and those who are healthy, etc.

"3. Owners were concerned about reduction in their property values and accompanying obstruction of views (one of the reasons for buying expensive Marina properties).

"4. Although the antennas would be covered with a fence style arrangement, radiation levels will emit through wood and cement 24 hours a day, 7 days a week permanently. No documents could be passed out to attendees of the amount of radiation emitted.

"5. A coverage map was requested. Other smaller antenna locations are nearby; one will be dismantled and incorporated in the groupings on the Lombard St. garage. Every 3-4 block quadrants are included in a 5-year plan and will house additional antennas.

"6. Studies were requested. Also, what methodology was used to determine "gap"!

"7. Any temporary or permanent resident with 500' will be impacted.

"8. Two members of our team will be available for parents to sign a petition on Monday, January 31st indicating that you do not want the antennas placed on top of the garage. This petition will be presented to the Board of Supervisors (need 150-160 signatures in the affected neighborhood). AT&T or their agent has already contacted the school.

"9. AT&T will lease the garage parking spaces from the City and County of San Francisco; Lombard Street has no other publicly own building and was chosen for that reason. Leasing cost estimates of \$15,000 and above will be paid monthly to the CCSF.

"10. Please let us know if you have another location suggestion and we will included it in our presentation or if you would like to attend the Board of Supervisors Meeting or the Planning Commission meetings when scheduled. Contact: Christina Stout (415) 922-5602 or Frances Gouveia (885-3317)."

It should be noted that the meeting was held on the very day of the

President Obama's State of the Union Message; a National basketball game was held and televised; it rained that evening; and some who wanted to attend had prior meeting commitments that couldn't be changed. AT&T representatives have said NO to another scheduled community meeting. To date (March 23rd) we have received NONE of the above requested materials. An AT&T representative stated at the January 25th meeting that the reason for it being held January 25th was to "avoid the holidays".

At that same meeting, the actual number of antennas to be placed on top of the garage at 2055 Lombard St. was less than we learned at a later date. Also: 27 disks (three on each pole, three-pole clusters) can be adjusted and lowered to direct EMF radiation so that travelers using Highway 101 Lombard St. corridor going to and from Marin County will not have "dropped calls" (while driving) vs the permanent affects on our neighborhood.

As seen by the number of gathered signatures, the neighborhood does NOT want these 9 - 7' powerful antennas with 27 large disks, plus 6 supportive refrigerator size equipment cabinets, on top of the garage above the Post Office covering a circumference of 500' (previous telephone companies stated 300'), obstructing views, reducing property values, and damaging the cellular structure of at risk children, seniors, and neighbors.

Sincerely,

Christina Stout, Long-time Resident, Team Leader, Voter

Existing Surrounding Sites at 2055 Lombard St (CN5537)



at&t

Statement of Hammett & Edison, Inc., Consulting Engineers

The firm of Hammett & Edison, Inc., Consulting Engineers, has been retained on behalf of AT&T Mobility, a personal wireless telecommunications carrier, to evaluate the base station (Site No. CN5537) proposed to be located at 2055 Lombard Street in San Francisco, California, for compliance with appropriate guidelines limiting human exposure to radio frequency ("RF") electromagnetic fields.

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SMR (Specialized Mobile Radio)	855	2.85	0.57
700 MHz	700	2.35	0.47
[most restrictive frequency range]	30-300	1.00	0.20

The site was visited by the undersigned engineer during normal business hours on April 9, 2010, a non-holiday weekday, and reference has been made to information provided by AT&T, including zoning drawings by Streamline Engineering and Design, Inc, dated August 6, 2010.

Checklist

1. The location of all existing antennas and facilities at site. Existing RF levels.

There were observed no wireless base stations installed at the site. Existing RF levels at ground level near the site were less than 1% of the most restrictive public exposure limit.

2. <u>The location of all approved (but not installed) antennas and facilities</u>. <u>Expected RF levels from</u> approved antennas.

No other WTS facilities are reported to be approved for this site but not installed.

3. <u>The number and types of WTS within 100 feet of proposed site and estimates of additive EMR</u> emissions at proposed site.

T-Mobile has installed similar antennas in a commercial sign in front of a restaurant located across Lombard Street, about 100 feet away.



be demonstrated to ensure that occupational protection requirements are met. Posting explanatory warning signs^{*} on the screens in front of the antennas, such that the signs would be readily visible from any angle of approach to persons who might need to work within that distance, would be sufficient to meet FCC-adopted guidelines.

10. Statement of authorship.

The undersigned author of this statement is a qualified Professional Engineer, holding California Registration Nos. E-13026 and M-20676, which expire on June 30, 2011. This work has been carried out under his direction, and all statements are true and correct of his own knowledge except, where noted, when data has been supplied by others, which data he believes to be correct.

Conclusion

Based on the information and analysis above, it is the my professional opinion that the operation of the base station proposed by AT&T Mobility at 2055 Lombard Street in San Francisco, California, will comply with the prevailing standards for limiting public exposure to radio frequency energy and, therefore, will not for this reason cause a significant impact on the environment. The highest calculated level in publicly accessible areas is much less than the prevailing standards allow for exposures of unlimited duration. This finding is consistent with measurements of actual exposure conditions taken at other operating base stations. Posting of explanatory signs is recommended to establish compliance with occupational exposure limitations.

E-13026 M-20676 William 707/996-5200 Exp. 6-30-2011

October 18, 2010

⁴ Warning signs should comply with OET-65 color, symbol, and content recommendations. Contact information should be provided (*e.g.*, a telephone number) to arrange for access to restricted areas. The selection of language(s) is not an engineering matter; the San Francisco Department of Public Health recommends that all signs be written in English, Spanish, and Chinese.

HAMMETT & EDISON, INC. CONSULTING ENGINEERS SAN FRANCISCO

AT5537599 Page 3 of 3

4. Location (and number) of Applicant's antennas and back-up facilities per building and location (and number) of other WTS at site.

AT&T proposes to install nine Andrew Model DBXNH-6565A-R2M directional panel antennas behind new view screens to be installed on the sides of the elevator penthouse above the top level of the five-story parking garage located at 2055 Lombard Street in San Francisco. The antennas would be mounted with 4° downtilt at an effective height of about 56 feet above ground, 17¹/₂ feet above the top level of the parking garage, and would be oriented in groups of three at about 120° spacing, to provide service in all directions.

5. <u>Power rating (maximum and expected operating power) for all existing an proposed backup</u> equipment subject to application.

The expected operating power of the AT&T transmitters is reflected in the resulting effective radiated power given in Item 6 below; the transmitters may operate at a power below their maximum rating.

6. <u>Total number of watts per installation and total number of watts for all installations at site.</u>

The maximum effective radiated power proposed by AT&T in any direction is 6,250 watts, representing simultaneous operation at 1,750 watts for AWS, 2,170 watts for PCS, 1,580 watts for cellular, and 750 watts for 700 MHz.

7. <u>Plot or roof plan showing method of attachment of antennas, directionality of antennas, and height</u> <u>above roof level. Discuss nearby inhabited buildings.</u>

The drawings show the proposed antennas to be installed as described in Item 4 above. There were noted no buildings of similar height nearby.

8. <u>Estimated ambient RF levels for proposed site and identify three-dimensional perimeter where</u> exposure standards are exceeded.

For a person anywhere at ground, the maximum ambient RF exposure level due to the proposed AT&T operation is calculated to be 0.0095 mW/cm², which is 1.2% of the applicable public exposure limit. Ambient RF levels at the site are therefore estimated to be below 2% of the limit. The three-dimensional perimeter of RF levels equal to the public exposure limit is calculated to extend up to 53 feet out from the antenna faces; this does not reach the top floor of the garage or any other publicly accessible areas.

9. Describe proposed signage at site.

Due to their mounting locations, the AT&T antennas would not be accessible to the general public, and so no mitigation measures are necessary to comply with the FCC public exposure guidelines. To prevent occupational exposures in excess of the FCC guidelines, no access within 18 feet directly in front of the antennas themselves, such as might occur during maintenance work on the outside of the elevator penthouse, should be allowed while the base station is in operation, unless other measures can



AT5537599 Page 2 of 3

be demonstrated to ensure that occupational protection requirements are met. Posting explanatory warning signs^{*} on the screens in front of the antennas, such that the signs would be readily visible from any angle of approach to persons who might need to work within that distance, would be sufficient to meet FCC-adopted guidelines.

10. Statement of authorship.

The undersigned author of this statement is a qualified Professional Engineer, holding California Registration Nos. E-13026 and M-20676, which expire on June 30, 2011. This work has been carried out under his direction, and all statements are true and correct of his own knowledge except, where noted, when data has been supplied by others, which data he believes to be correct.

Conclusion

Based on the information and analysis above, it is the my professional opinion that the operation of the base station proposed by AT&T Mobility at 2055 Lombard Street in San Francisco, California, will comply with the prevailing standards for limiting public exposure to radio frequency energy and, therefore, will not for this reason cause a significant impact on the environment. The highest calculated level in publicly accessible areas is much less than the prevailing standards allow for exposures of unlimited duration. This finding is consistent with measurements of actual exposure conditions taken at other operating base stations. Posting of explanatory signs is recommended to establish compliance with occupational exposure limitations.

E-13026 William M-20676 707/996-5200 Fxn. 6-30-2011

October 18, 2010

Warning signs should comply with OET-65 color, symbol, and content recommendations. Contact information should be provided (*e.g.*, a telephone number) to arrange for access to restricted areas. The selection of language(s) is not an engineering matter; the San Francisco Department of Public Health recommends that all signs be written in English, Spanish, and Chinese.

HAMMETT & EDISON, INC. CONSULTING ENGINEERS SAN FRANCISCO

AT5537599 Page 3 of 3

RBS 2106

The GSM Macro Outdoor Base Station



RBS 2106 is a high capacity, compact outdoor macro radio base station supporting up to twelve transceivers per cabinet. It is possible to build one, two and three sector configurations including dual band configurations in one cabinet.

Ņ

Being the latest member in the RBS 2000 family, RBS 2106 is to date the most powerful outdoor RBS in the world. Keeping the successful characteristics of the existing RBS 2000 portfolio and improving functionality as well as operation and maintenance makes the RBS 2106 a very cost-effective solution for growing GSM operators.

The RBS 2000 family supports a wide range of applications ranging from extreme coverage to extreme capacity. Being a RBS 2000 member guarantees coexistence with the installed base of RBS 200 and RBS 2000 products. Ericsson's synchronization based BSS features ensure that transceivers from different generations of radio base stations can easily form common cells. Operators can therefore bridge the past with the future. By making existing sites futureproof, investments are protected while migrating to 3G.

Part of the grow-on-site concept

Since it is becoming increasingly difficult to find new base station sites, it is of great interest to remain on the existing sites as long as possible. Site space is often a limiting factor for capacity growth. The powerful RBS 2106, included in Ericsson's grow-on-site toolbox, addresses this problem. On many sites, two or more existing cabinets can be replaced by one RBS 2106. This is of major importance, since it makes it possible to reuse the space to rollout WCDMA equipment. The RBS 2106 will pave the way for WCDMA.

Also interesting for new locations, the RBS 2106 offers a complete solution in stand-alone cabinet which rapidly can be implemented outdoors. All the units to run the RBS are included in this single cabinet, there is no need for an extra product.

ERICSSON 🗐



JUL 11 2011

TO: Christina Olague, Commission President and All Planning Commissioners

CITY & COUNTY OF S.F. PLANNING DEPA 2010.0987C 2055 Lombard Street - south side bet Fillmore and Webster Sts SECEPTION SUBJECT: Planning Code Sections 234.2(a) and 303, to allow AT&T Mobility to locate up to nine (9) WTS panel antennas and related equipment on an existing elevator penthouse located on the top floor of the five-story building containing ground-floor commercial space and commercial parking, within a P (Public) district and 40-X Height and Bulk District.

Enclosed as follows:

1. Left side materials from the Planning Department file representative of AT&T.

2. Right hand side rebuttal from the Marina community against placing "farm" on this location along with 408 signatures AGAINST the approval of a Conditional Permit to be approved for this location and no other.

3. Research adequate height buildings locations down Lombard St.; for example, placing reduced size high tech high speed equipment on legal rooftop billboard located on Lombard just 1/4 block from Steiner on top of adequate height bldg.

4. Fiber-optics extremely high speed method of communications for cell phones can be done instead of "farm" on top of this location. AT&T seems to have dollars available.

4. Parking spaces are at a premium and any loss has an impact in this high restaurant/bar area.

5. Earthquake and high wind risk of debris from roof into play yard of children.

6. Excessive traffic use already exists in alley between garage and play yard by Post Office Trucks, FedEx, UPS, residents, and Lombard Street turnarounds - maintanence AT&T trucks will add to this increasing concern of safety.

7. Tule Elk Pre-School of at risk developing young children 4,5,6,7,8, 9 years old within 40 feet of heaviest impact of the intended 24/7 radiation disks/panels directed at their school for the benefit of cell phone users traveling along Highway 101 - Lombard to Marin County.

8. Property values/views - expensive homes and embassies up the hill will be impacted.

9. AT&T intended purchase of T-Mobile filing - T-Mobile has already existing grid - this location is not necessary or crucial. It can be moved further down Lombard.

10. Although requested, AT&T representatives have not provided the community with full and complete studies, the methodology used to determine the "gap", the proposed 5-year plan, and feel they have done "due dilligence" holding only one meeting on January 25, 2011, on the night of the President's State of the Union televised speech, a National Basketball game, prior appointments that could not be changed, and it was avery rainy night.

AT&T and it's representatives held a community meeting at 7:00 p.m. in the La Barca Restaurant on January 25, 2011 to discuss nine 7' antennas emitting microwave radiation be placed on the top of the garage next to the Tule Elk School and above the Lombard St. Post Office.

Proposed plans have already been filed with the Department of Health and the San Francisco Planning Department prior to the meeting on January 25th. These plans were known as far back as the first week in November 2010. Three months have passed before the community input meeting occurred on Tuesday, January 25, 2011.

Following are some of the items discussed at this meeting:

1. Other locations were not considered as the garage location filled a gap in the grid and thus reception. Three of the antennas will be place in clusters and will face a specific direction completing a triangle pointing toward the school, a cluster toward Van Ness Ave. and another cluster toward the Golden Gate Bridge. Once placed there, other telephone companies will increase their interest and it will extend the "farm".

2. Individuals in the meeting expressed major concerns for microwave radiation affects on young, growing and developing children attending the school. Several thoughts came to mind: how much radiation, if any, is safe, affects long-term, affects on children who are challenged, have illnesses, and those who are healthy, etc.

3. Owners were concerned about reduction in their property values and accompanying obstruction of views (one of the reasons for buying expensive Marina properties).

4. Although the antennas would be covered with a fence style arrangement, radiation levels will emit through wood and cement 24 hours a day, 7 days a week permanently. No documents could be passed out to attendees of the amount of radiation emitted.

5. A coverage map was requested. Other smaller antenna locations are nearby; one will be dismantled and incorporated in the groupings on the Lombard St. garage. Every 3-4 block quadrants are included in a 5-year plan and will house additional antennas.

6. Studies were requested. Also, what methodology was used to determine "gap"!

7. Any temporary or permanent resident within 500' will be impacted.

8. Two members of our team will be available for parents to sign a petition on Monday, January 31st indicating that you do not want the antennas placed on top of the garage. This petition will be presented to the Board of Supervisors (need 150-160 signatures in the affected neighborhood), AT&T or their agent has already contacted the school.

9. AT&T will lease the garage parking spaces from the City and County of San Francisco; Lombard Street has no other publicly own building and was chosen for that reason. Leasing cost estimates of \$15,000 and above will be paid monthly to the CCSF.

10. Please let us know if you have another location suggestion and we will included it in our presentation or if you would like to attend the Board of Supervisors Meeting or the Planning Commission meetings when scheduled. Contact: Christina Stout (415) 922-5602 or Frances Gouveia (885-3317).

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Survey of AT&T Wireless Customers Near 2055 Lombard Street

Name	Address	How Long AT&T Customer?	Approx. Minutes Used per Month	How is Voice Reception in Your Home/ Apartment?	How is Data/ Internet Reception in Your Home/ Apartment?
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HEARDC-	3053Fill Noke	2 ypis	16h	Great	Great
John Frigel	3129 Washington	5 your	500	Great	Great
Albert Worg	3218 Fillmore St	9 yours.	50	Good	Good
CHRIS OLEARY	3130 WEBSTER ST	4 yes	75	GREAT	GREAT

Survey of AT&T Wireless Customers Near 2055 Lombard Street

Survey of AT&T Wireless Customers Near 2055 Lombard Street

Name	Address	How Long AT&T Customer?	Approx. Minutes Used per Month	How is Voice Reception in Your Home/ Apartment?	How is Data/ Internet Reception in Your Home/ Apartment?
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Post Office Box 29086 Presidio Station San Francisco California 94129 (415) 931-3438

June 25, 2011

San Francisco Planning Commission 1650 Mission Street, Suite 400 San Francisco, CA 94103

RE: Case Number 2010.0987C 2055 Lombard Street

This is to affirm that Golden Gate Valley Neighborhood Association voted to oppose adding cell phone antennae and related equipment on any roof close to a school or playground in what one hopes, but cannot of course be certain, is an excess of caution.

Sincerely, Robert Bardell, president, Golden Gate Valley Neighborhood Association

ė;

John Jones

2143 Greenwich Street San Francisco, CA 94123

July 6, 2011

ATTENTION: Sara Vallve City of San Francisco Planning Department 1650 Mission Street, #400 San Francisco, CA 94103

Dear Planning Department:

I am a resident of the Cow Hollow neighborhood, living at 2143 Greenwich Street. I have received notice of AT&T Mobility's proposal to install nine antennas for a wireless communication facility at the 2055 Lombard Street parking garage. I *strongly* oppose this and ask that our local representatives make sure that they represent our interests in this matter. I ask that you completely deny AT&T's request for these antennas and related equipment as I do not want the radiation from these antennas in my neighborhood. Please put the requests of the members of this community before the interests of AT&T.

I will be following the events of your hearings.

Sincerely,

John Jones

John MI Jone

City of S.F. Clanning Dest Drissiph St. SF CA

July 8,2011

Dear Peraning. I nish to let you know that Som opposed to the 9 antennas on top of Lowbord

gerage. () 400 close to Tale Elk School. 2 CANCER LYporene to children and low Hollow Midents. ATIT familie aut more ni the future uithout molice to mightors Extension to elevatore too (4)high blocking views fim noof Decki-ni N. O (11. 7762 M.n. 2063 Guernisch /2

Eleanor J. Shrader 2058 Greenwich Street San Francisco, CA 94123 Phone # (415) 346-6263 E-mail = <u>ElliesJoy@aol.com</u> July 6, 2011

Sara Velive Planning Department 1650 Mission Street # 400 San Francisco, CA 94103

Dear Ms. Velive,

I reside in Cow Hollow at 2058 Greenwich Street.

I have read the notice from AT&T requesting to have up to 9 antennas in our neighborhood. I strongly oppose this action and ask that our representatives make sure that they represent OUR interest in this matter. Therefore, I ask that you completely deny AT&T's request for these antennas and related equipment. I do not want the radiation from these antennas in our neighborhood.

Please consider this request from a member of this community before the interests of AT&T. I will be following the events of these hearings and look forward to having your support.

Sincerely,

Eleanor Shrader

July 4, 2011

Glanning Dept. SF City Hall

Dear Mrs Velle

I do not wish To see The mine antennas insteaded at houring 2055 too close to the school. Sau also concircing about ATIT farming out more on the building after theme get installed And the ush to all of our neighbors. We to not know what are the redetire levelio on which is the damy tend effects we have antennar on Min & Buchan (Humuid & Strinn - NO more aldo pot want there i our nightonhool Cable Bennett 2013 Juemich Street SF 94123

2060 Greenwich St. San Francisco, CA July 6, 2011

Ms. Sara Vellve Planning Department 1650 Mission St. #4000 San Francisco, CA 94103

Dear Ms. Vellve,

I am a resident of Cow Hollow, living at 2060 Greenwich Street.

I received notice of AT&T's request to have up to 9 antennas in our neighborhood. I strongly oppose this and ask that our local representatives make sure that they represent our interest in this matter. Therefore, I ask that you completely deny AT&T's request for these antennas and related equipment. I do not want the radiation from these antennas in our neighborhood, especially since it involves preschool children at the Elk Grove Park just across the street.

Please consider the request of the members of this community before the interests of AT&T. I will be following the events of your hearings and look forward to having your support.

Sincerely,

Jason Yasúmoto

2060 Greenwich St. San Francisco, CA July 6, 2011

Mr. Sara Vellve Planning Department 1650 Mission St., #400 San Francisco, CA 94103

Dear Ms. Vellve,

We are residents of Cow Hollow, living at 2060 Greenwich St.

We received notice of AT&T's request to have up to 9 antennas in our neighborhood. We strongly oppose this and ask that our representatives make sure that they represent our interest in this matter. Therefore, we ask that you completely deny AT&T's request for these antennas and related equipment. We do not want the radiation from these antennas in our neighborhood, especially since it involves preschool children at the Elk Grove Park just across the street.

Please consider the request of the members of this community before the interests of AT&T. We will be following the events of your hearings and look forward to having your support.

Sincerely,

John Yasumoto

Chitose Yasumoto

Ms. Lara Vellve 77711 Plannip Dept. 1650 Mitsion St. # 400 Jan Francisco, Ca. 94103 Dear the Vellve, My husband and I are residents of Con Hallow residing at 2069 Filbert 57 We have received notice of AT+T's request to install up to 9 autennas in our neighborhood. We strangly oppose this and ask our local representatives to Make sure that they represent our whereast totally deny ATAT's request for there antennas and all related equipment. We ask that you counder that we do hat want the radiation from these antennas in our neighborhood. The uge you to put the requests of this commenty The will docely follow the events of your hearings and look forward to your & upport. Yours Sincerely MichE FESSEL MicheFersel W. J. FESSEL M.D Whene
Sara Vellve Planning Department 1650 Mission St. #400 San Francisco, CA 94103

Dear Ms. Velle,

I am a resident of Cow Hollow, living at 2039 Greenwich Street. I have received notice of AT&T's request to install up to nine (9) antennas in our neighborhood. I **strongly** oppose this request and ask that our local representatives are heard and make sure they represent our interests in this matter. I ask that you deny AT&T's request for these antennas and related equipment, in its entirety. I ask that you consider, I do not want the radiation from these antennas in my neighborhood. I ask that you put the requests of the members of this community before the interests of AT&T.

I will be following the events of your hearing and look forward to having your support in the matter.

Sincerely, Lori Van Tassell

JULY 5,2011

MS. VELLE 1650 MISSION STREET PLANNING DEDT S.F 94103

DEAR MS VELLE,

IAM CONCERNED ABOUT THE NEW ATTENNA'S GOING TO BE INSTALLED ON TOP OF THE LOMISARD GARAGE. I FEEL IT IS IN THE WRONG LOCATION! WHY? TOO CLOSE TO THE SCHOOL, WHICH HAS VERY YOUNG RIDS. ALSO THE CHLOER PISIC FOR ALL OF COW HOCLDR RIDS. ALSO THE CHLOER PISIC FOR ALL OF COW HOCLDR THERE ARE OTHER BUILDINGS ON LOMBARD AWAY FRAM THE SCHOOL, PLEASE TELL THE SUPERVISORS TO NOOR AT ANDHER NOCATIONS I ASK ATS T NOT TO INSTALL THESE HOCH COULD THIS BE GOOD, MY CORE PHONE WORKS E REAT IN ALL OF SF. AND IAM A ATS T CUSTOMER.

SINCENELY.

MARON Thimason 2037 GREENWICH ST SF 94123

Carol Lynn Jones

2143 Greenwich Street San Francisco, CA 94123

July 6, 2011

ATTENTION: Sara Vallve City of San Francisco Planning Department 1650 Mission Street, #400 San Francisco, CA 94103

Dear Planning Department:

I am a resident of the Cow Hollow neighborhood, living at 2143 Greenwich Street. I have received notice of AT&T Mobility's proposal to install nine antennas for a wireless communication facility at the 2055 Lombard Street parking garage. I *strongly* oppose this and ask that our local representatives make sure that they represent our interests in this matter. I ask that you completely deny AT&T's request for these antennas and related equipment as I do not want the radiation from these antennas in my neighborhood. Please put the requests of the members of this community before the interests of AT&T.

I will be following the events of your hearings.

Sincerely,

Carol Lynn Jones

Horme Jon

debbie reno hubbard 2138 filbert street • san francisco, ca 94123

July 6, 2011

ATTENTION: Sara Vallve City of San Francisco Planning Department 1650 Mission Street, #400 San Francisco, CA 94103

Dear Planning Department:

I have been a resident of Cow Hollow for 25 years, living at 2138 Filbert Street. I have been informed of AT&T Mobility's proposal to install nine antennas for a wireless communication facility at the 2055 Lombard Street parking garage.

I *strongly* oppose this and ask that our local representatives make sure that they represent our interests in this matter. I ask that you completely deny AT&T's request for these antennas and related equipment as I do not want the radiation from these antennas in my neighborhood. Please put the requests of the members of this community before the interests of AT&T.

I will be following the events of your hearings.

Sincerely,

noffubbard -Report to

Deborah Reno Hubbard

DRH:tim

Charles Featherstone

2143 Greenwich Street San Francisco, CA 94123

July 6, 2011

ATTENTION: Sara Vallve City of San Francisco Planning Department 1650 Mission Street, #400 San Francisco, CA 94103

Dear Planning Department:

I am a resident of the Cow Hollow neighborhood, living at 2143 Greenwich Street. I have received notice of AT&T Mobility's proposal to install nine antennas for a wireless communication facility at the 2055 Lombard Street parking garage. I *strongly* oppose this and ask that our local representatives make sure that they represent our interests in this matter. I ask that you completely deny AT&T's request for these antennas and related equipment as I do not want the radiation from these antennas in my neighborhood. Please put the requests of the members of this community before the interests of AT&T.

I will be following the events of your hearings.

Sincerely,

Charles Featherstone

Charly Eastherative

Dear Jara.

I wish to address the 9 autenna being installed at 2055 Jombard I do NOT want these is my neighbor because of the radiation. When I want to the internet there is so much about this and I do beleive we do NOT Know the impact. and affie ATIT will just leave then installed and gooffier seeved your, like the off TV antennas I also do not like flessis so close to the Tule Elt schod. Oppose HAS.



Jeneja Jologgi 2061 Greenwich Street San Maucisco CA 94123

Manin, Dept Missimst Son Francisco.

To whom it May Concean I have lived in Som Fancisco all Born 1980 my life and I do had want ant ence in my nisslegon because the carete with part and the Acleal . I lis with a rod ft of the professed sike and April a let of time out Jooner an ageinst Vilis. Succeed four Dengin Planting 7/1/11

Sara Vellve Planning Department 1650 Mission St. #400 San Francisco, CA 94103

Dear Ms. Velle,

I am a resident of Cow Hollow, living at 2039 Greenwich Street. I have received notice of AT&T's request to install up to nine (9) antennas in our neighborhood. I strongly oppose this request and ask that our local representatives are heard and make sure they represent our interests in this matter. I ask that you deny AT&T's request for these antennas and related equipment, in its entirety. I ask that you consider, I do not want the radiation from these antennas in my neighborhood. I ask that you put the requests of the members of this community before the interests of AT&T.

I will be following the events of your hearing and look forward to having your support in the matter.

Sincerely,

Lisa Van Tassell

We the undersigned are petitioning the Mayor, Board of Supervisors, Planning Commission, Board of Appeals, Dept. of Health against the application/installation of AT&T antennas/equipment proposed for 2055 Lombard St. garage. We feel there are alternate locations better suited for this microwave 9 antenna installation where at risk, challenged children at the Tule Elk School located behind the garage will not be impacted. This is a heavily populated residential, businesses, citizens area.

420

1.	1. Name ROBERT E. DAVID Phone	415-990-9059 Date 6/15/11
	Address	E-Mail BUBDAVID CBOBDAVID, COM
2.	2. Name MARY E. RUSSELL_ Phone_	415-771-5787 Date 6/15/11
	Address	E-Mail Maryerussell24@ yahoo
3.	3. Name Skyr (zemberPhone_Phone_Phone_Phone_Phone_Phone_Phone_Phone_Phone_Phone_Phone_Phone_Phone_Phone_Phone_Phone_Pho	415-474-1782 Date 6/15/11 Com
	Address 1382 Union St	E-Mail Mindlinked & auth Con
4.	4. Name_Jane McWhopfer Phone_	715-202-4808 Date -115/11
	Address 2531 Googh St	E-Mail
5.	5. Name Shuridan Forbes Phone	
	Address 611 We shington St # 2505	SF E-Mail sheridanturbese yatro, com
6.	6. Name Rogen Kuhn Phone	415.9210418ate 7/7/11
	Address 2024 Lombord St	E-Mail RKULAD MARINA pet, com
7.	7. Name CARIS OLEARYPhone_	650 208-0078 Date 7.7.11
	Address 3130 Webster St. SF	E-Mail
8.	8. Name CANTHIN YAROSHOPK Phone_	415-474-674 Date 1-7-4
	Address 1207 CHERTONNY 37, #3 SF	E-Mail Nonit
9.	9. NamePhone	Date
	Address	E-Mail
10.	10. NamePhone	Date
	Address	E-Mail
	Submitted by Chris	struce Stout
0	Noter, Sy. Cetyon Team	member
	City & County San Th	cancesed CA.

1. Name	JOHN ROMMU	Phone	5 567-1936	Date 6/26/11	
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Marina Phone 415-771-0578 ate 4/26/2011 1. Name Fillmore st SF 94123 E-Mail Maringhery a Stx global. Address _____Phone (0199571245 Date 4 2. Name 🏴 SIM 202011 E-Mail MbVGibSUND UNDOU COM Address 🕻 3. Name _Phone Date Address _E-Mail_ 4. Name_____ Phone___ Date Address E-Mail 5. Name_____ Phone Date Address ____E-Mail_____ 6. Name_____ Phone___ ___Date____ Address E-Mail_____ 7. Name_____ Phone____ _____Date ____ Address_____ E-Mail 8. Name____ Phone Date Address E-Mail 9. Name Phone Date____ Address E-Mail 10. Name Phone Date Address E-Mail Les miller

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ave , Mark 475) - 752 - 8648 Date E-1141L Phone 681-7608 Date 3-8-11 2. Name 74/21 E-Mail Address Cr Phone 567- 534 9 Date 3/8/11 3. Name INU 97.94115 E-Mail Address / Phone 665 - 7045 Date 3/8/11 4. Name DIANA JANG-OCEAN AVE 4745 Address E-Mail Phone 160 630 4049 Date 3/8/2011 2526 5. Name (Address 2061 WICH ST 9403 E-Mail REGINAPOLOZ 2/@? GREEN 6. Name Phone Date Address E-Mail 7. Name Phone Date Address E-Mail 8. Name Phone Date Address E-Mali 9. Name Phone Date Address * E-Mail **10.** Name Phone Date_ Address E-ivîail

1. Name_ KOIKKI MANLES PHONE UN5. 817 17 37 Date Address 2740 GREENWICH ST, SF 94123 E-MAIL Dikkimannes @ mail.com happphone 415 407628 Date 3. 11.2011 2. Name SE94115-Mail Mingzie egmail. net aguna St Address Phone 415 MAANOVADate 3/11 eal 3. Name 94133 E-Mail Kakembrale & gmail com Thesmut # CH Address 4. Name end_Phone_415-561950 Bate_3/11 mar 2 SFCa 94/18 E-Mail Sporrymms yahoo. com Address 5561 415-131-505Date M 5. Name (Phone Address ____Phone______2-3238_____Date_____ 6. Name Address 511 Lind 5/-E-Mail 7. Name 🌓 Phone[<] Date Address_(E-Mail J 37 14, estin __Phone 3 B. Name apellegrini Vahco Address E-Mail **J. Name** Phone 415 Address E-Mail 10. Name_ Phone Date Address E-Mail

1. Name RONALD MOTLIN PHONE 415-928-4051 Date 3.4.2011 Address YOIRONSA: ph SF, CA 94111 E-MAIL COND MBTS, US. COM Elic _Phone ----Date 3.441 2. Name Y Did LAWAR ST 24123 E-Mail S. 1. 8032 Chot Mail com Address _Phone_____Date____Date_____ 3. Name Any E-Mail anywers yan (agner) Address 3060 Filmone 4. Name AREE MOSTAGHIN Phone (415) 79479 Date 3/6/ 2011 Address 3028 WEBSTER St. E-Mail _____Phone_559-288.5085 Date_3/7/201(5. Name KEN Address 3154 BuchANAN St. E-Mail Kulee 726 gmail. Con 5. Name_ Claime Louie_ Phone_350 - 7167_ Date_ 3/9/2011 Address 1720 Laskin Street 94160 E-Mail non 7. Name Hudkir Phone 834 - 2835 Date 3/11/11)AY 5F 94131 E-Mail -Address 65DRA 3. Name_Monica Douglas____ Phone_346-200 Date_3/11/11 nut St, St 94123 E-Mail MONTICE O, a. doug (AS @ citi. com Address 2198 Church Phone_<u>350-7167</u> Date_<u>3</u> 11 J. Name MR Louis Address 1720 HANKIN STREET SF 94160 E-Mail. 10. Name Michele Muscolinio Phone 438-0715 Date 3/12/2011 Address 27 ALTA STREET Minit E-Mail Knild

We the undersigned are petitioning the Mayor, Board of Supervisors, Planning Commission, Board of Appeals, Dept. of Health against the application/installation of AT&T antennas/equipment proposed for 2055 Lombard St. garage. We feel there are alternate locations better suited for this microwave 9 antenna installation where at risk, challenged children at the Tule Elk School located behind the garage will not be impacted. This is a heavily populated residential, businesses, citizens area.

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1.	Name_ ECGY & AINZAWA	Phone #15=221-4412 Date 3/4/11
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2.	Name_ Keiko akashi	Phone 776-5767 Date 3/4/1/-
	Name_ <u>Keike akashi</u> Address: 1875 Buddandan of	ROS 94115 SE E-Mail
3.	Name Lois Olwa	Phone 346.9576 Date 3/3/11
	Address 35 Galilee Hs	E-Mail
4.	Name Ray Shara	
	Address 747- 22nd AVES 1 C	
5.		_Phone <u>333-1660</u> _Date_3 <u>3</u> ///
	Address P-D SDX 12295 SF	9412 E-Mail POPE
6.	Name Mutsumi M. HADA	_Phone
	Address 1429-23 Ave. 5	F94122 E-Mail
7.	Name JOYCES. KUWATAN	_Phone_415_447 <i>644</i> 9
	Address 1400 GEARY RIV	S.F. Con. E-Mail
8.	Address 1400 Geary RIV Name Kuis Grownot	_Phone
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9.	Name_ Kay Onishi	_Phone753-2734_Date_3/3/11
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1. Name_ xhu (Jamuda Phone 415 567-7123 Date 3/2/11 Address 2323 filbert 5) E-MAIL KYamle 34@ MSM. Com 2. Name Mary Karon Phone 387-0973 Date 3/2/11 Address 220-192 AUG S.F. 94121 E-Mail mm_ Phone 415 751-5077Date 3/2/11 3. Name Cegner Chrk line. 94 Address 68 E-Mail 4. Name Ency M. Hener Phone 415-776-2304 Date 3/2/11 Address 2825 VAN NESS AVE #3 5 94109 E-Mail 1 Phone (415)990-615 Bate 3-2-11 5. Name VE.S. 7, Ca. 9418 E-Mail -Address ear Uga 6. Name _____Phone<u>415 5864269</u>Date<u>3-2-11</u> Mineria SI- SF. CA E-Mail Address Phone 45357080^{\prime} Date 37. Name_/// ENTO STA201 Address う4う7 8. Name <u>M backan Hoques</u> Phone <u>415 586-873</u> Date & March dell Address 319 Windy Way SF. E-Mail 9. Name Hiroshi Tamura Phone 221-3978 Date 3-2-11 Address 211 - 27th ª 203 SF _E-Mail 10. Name_CHARLES, NA. TO, 100 KA Phone_415-447-7929 Date_3/24 Address 1881-SUTTER ST APT208 E-Mail Se kmille

Dale Bell ANDE k Name CAME Multers (20100) (Hagn b) 2. Name Monum Bernund (phone 1678 5186 Address 4670 OES AA. CHANESS SF a Menil B Name Drange Wag 1 Phone 2/15 526 BDC/ Thate 3 2 2 Address 2324 - 9th Ave. S.F. 94116 E.Mail 4. Name ACCDNRICI Phone SGG10 78 Date 3/2/ - Address 2151-14 ME. S.F. 99.116 E-Mail 5. Name Volt Janaha Phone 45 34-0246 Date 3 2 Address HY34 Churry & S.7 94122 i Mail. non 5. Name Asulco Fulcuda Phone 351-0138 Date 3/2/11 Middress 1875 Buchanan ST # 303 7. Name FRANCESJ WARKER Phone 415-880-7 Date 03-03-11 E-Mail Grankie jo photomail. (017) Address 1238-23RD AVE. 8. Name Farret Gr Us min Phone Date 3-2-11 Address 367 290HAVE SECA 9412 9. Name 10 anda parcia Phone 415-648-3667 Date 3/2/2011 Address 80 HILL #1, SF CA 94110 E-Mail 10. Name Vish Fornant Phone 415-264-9483Date 3/2 Address 33 Lapidge St SF CA 94110 E-Mail I Amitted by 4 Cour

1. Name FRENIE SUENAGA Phones (415) 752-9367 Date 3-3-11 Address <u>80637</u> # AVE ST. CA. <u>E-MAIL</u> 2. Name Shing Sugary Phone <u>415</u> 752 9367 Date <u>3-3-11</u> _____E-Mail_____ Address 806 3724 AUE 3. Name Ukawa Sharky Phone ware Date 3/3/11 Address 228 - 17 ta cere E-Mail 4. Name Sugar younda Phone 441-3586 Date 3-3-11 Address 2331 Filbert St St CA 94/23 E-Mail -Address 2331 Filbert & SF. CA 99123 E-Mail N/A 6. Name Kar Phone 465 7277 Date 3/5/ 11 Address & LAGINIZAS PR SF 94132 E-Mail N/A 7. Name_Jeff Matane Phone_831-3591_Date_314/11 Address 147-12th Ave#2 SF E-Mail imts 698 eyahoo, com Phone 415 440-7239Date 3-4-11 B. Name Address 1578 Feil E-Mail 9. Name A Roberta Phone 415 702 3158 Date 3/4/-11 Address 1881 Pine St SF 94109 E-Mail 10. Name Such Sugar Phone 415-752-9080 Date 3/0/11 Address 457 26th ar E-Mail Submitted by Christma & Stout tered Mater Pite & Counte

1. Name William way Phone 415 378 9523 Junte 3/4 Address 230 EDDY, #212 E-MAIL William Way@ bust.com 673-0828 Date 36 2011 Phone a internoto 2. Name A 5F94109-Mail afiafil Cal _____Date 2-6-3. Name 4. H. M. Marin Phone 787-5265 Address 455-25 E-Mail 415 Phone 66 4 -Date 3/6/11 ho Karhenda 7230 4. Name Address 4314 Pachico E-Mail 5. Name_ JANG MANARAW Phone 587-5157 Date 3/6/11 Address 12 VISTA VUrde it SF- Ca 94 131 E-Mail 6. Name Matthey Stims Phone 885-0896 Date 3/6/11 Address 66 cleary & # 303 E-Mail KOBONORBU (a) yahow 7. Name 100 Balambao Phone 415 933-6416 Date 316/11 Address 4420 Cartornia ST #4 SF CA A4118 E-Mail 8. Name Francica Estrada Phone 415-928-1170 Date 3-6-11 Address 1881 Pine St. I. SF. CH. E-Mail 94109 9. Name Chiguko Kakinchi Phone (415) 987-0152 Date 3 6 11 Address 431 Arguello Blup, SF CA94118 E-Mail Musehwa Phone Date 3. (0.11 10. Name E-Mail Address

1. Name	Lanayo Silver	Polom	• 566-4118	Dete	3/5/11
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2. Name_	ICK DAIRIKI	Phone	566-1093	Date 3/5/11	*
Address_<	2151-14 TH AVE. S.F. 94				
3. Name	SUYUMI TONOKA	Phone_	5876711	Date <u>3. 6, / /</u>	/
	777 ROLPH		E-Mail		
4. Name	tarumi Kishida	Phone	-751-0743	Date 3/5/2	2011
	615-34th Ave.				
	Illeen Jones			Date 3-6-11	
	66 Crestline Dir #44				
6. Name	richard quinge	Phone			(
•	179 Caberra				
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	iroshi Kashiwagi	Phone		Date 3-6-1	6
	4314 PACHECO ST. ST		•		
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Jobe Fillen Phone 441-1560 DATE 08.20 1. Name E-MAIL Cell ADDRESS 1375 (MODEL) 2. Name HEMMAINAYEZ 635-1433Date 02-75-11 Phone 616. Address WOO Post ST SFIA 94115 E-Mail FORROTT. Phohe 15 242 56 4 Date of 3. Name MARIA NAI ST #10 Address X 744 E-Mail _____Phone_____721-5520_Date_2-26-1/ 4. Name Day Telele Address 2100 webs fast "14123 E-Mail"-120m Phone 546-2954 Date 2-25-1 5. Name Main IXLEV (T Address E-Mail Phone 415425-8017 Date 2-28-11 CANALA 6. Name I.I.M.L Address 44 PINCOLI E-Mail 7. Name Sauce Janne Phone 346-6764Date 2/25/ E-Mail Address 8. Name Cecilic Cle 11e Phone 115 5103 3263 Date 2128/11 E-Mail CMDStachime Matma Com Address 3028 Webster SP 9. Name_ Ulwaudra Nixou Phone 4/5.563.5633 Date 2/28/11 Address 1592 UNION ST #315 94123 E-Mail A. DIXON @AYA. YALE, EDU 10. Name Altrigh MRylich _____Phone 922-4838 Date 2128/11 Address 1916- A Green J. M. Str. SF 94123 E-Mail HINTINA Allal

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1. Name ////11/ Atwnence Phone 4/5-923-0454 Date 4/6/ Address 2133 UNION ST E-Mail 2. Name_ST even Kenekes____Phone 4/5-595 42-84 Date 4/6/1/ Address PO BOX 821 BRISBARE 94005 E-Mail 3. Name Kate Mollins Phone 200-465-9912 Date 4/4/11 Address 1066 Stockton St 94108 E-Mail 4. Name MCHAR WILLAWS Phone 203.129 Date /16/11 Address 2635 FRANKLIN # 102 94123 E-Mail_ _____Phone 415.247.295 Date 4.6.11 5. Name SAM BLACK Address 3029 FILLMONEST. 94123 E-Mail 6. Name Stephanic Stokes Phone 415-567-1779 Bate 4-6-2011 Address_ 858 Filbert St 94133 E-Mail_ 7. Name Claire Holf Phone 415-420-0726 Date 4/6/01 Address 1014 1688 Sacumento St 4201 94109 E-Mail 8. Name Darah Tipple Phone <u>415-924-4033</u> Date <u>4/6</u> Address <u>A Warner CF, San Rafael, CA E-Mail</u> 9. Name REGAN CAPONI Phone ____ Date ____ Address 3111 Fillmore St E-Mail Fillmore ECO OPOL Com 10. Name ElEANOR (ARPENTERhone 415563-883 Pate____ Address 1869 ONION SFCIA E-Mail Jest Temele Officion

Submitted by: Christina E. Slout Registered Voler ally & County

1.	Name	Jesley Geonbardt ss 2621 Jaguna	Phone	921-0682	Date <u>4-6-11</u>	
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2.	Name	David Landry	Phone	577-605B	Date_4-6-11	
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_Phone_3/2387528Date_3/ Cordvey ess 1. Name Address 2030 48th Ave SF CA 94116 E-Mail Contessa 25 @aul com 2. Name Carla Souza Phone 310 729 3729 Date 31 G _E-Mail the real source og mail, com Lombord St Address 2030 3. Name Ordan Phone 415 123 8151 Date 31111 Address 2228 UNION ST. SF, CA 94123 E-Main HCannack espegiobal. not 4. Name 1/0 minic Par 2000 Phone 650-458-908 Date 3/1/1 OK, Gan Matoo, E-Mail Spiting bottle 1/al A 94461 Date 3/8/11 INS Phone 415 367 5997 Date 3/8/11 Noxé Address 5. Name____ Address 93A Sott St SF (A 94/17 E-Mail Wendywetting Smail. -Phone 925) 785 - 4854 Date 3/9/1 6. Name Kaine Address 3133 Lagung St., SF CA 94123 E-Mail rainey 712 @ hitman). Com 7. Name Parron Groom Phone 415 2776045 Date 3/ Boncin E-Mail Dchefygreen Address 17/6 8. Name_JCSSicer Engholm/ Phone_415 606 2405 Date_ 3-9-11 Address _____Phone______Date_____ 9. Name_NICOLE CRONIN SF, (A ricole e massake. Com Address 28 MMR ST#12 Phone_____543-6055 10. Name Dolomon Kahn 3/11/10 Date Address 128 Morris St +12 St, CA 34107 E-Mail Solflowere yahud. Cm Lebruilled by

Phone 4159226928 Date 2 1. Name E-Mail_ Address ER Phone 567-7013 Date 2. Name Address E-Mail And Phone 415 567-896 | Date 21 3. Name 🔼 breen win St. Address 2125 E-Mail Phone 181-698-9 ile-Swiss 4. Name E-Mail ar5334429manl.com Steiner St. Address Phone 7115635146 Date 2 5. Name/ Webaker St. #3 Address \$130 E-Mail Phone 4/5.335.097, Date 6. Name twood Address E-Mail 794-782 Date 21 Qe Phone 415 -M 7. Name Broad 255 St. SF Address E-Mail Phone 567-1936 Date 3/3 JACK ROMPN 8. Name SOLDA LOMBARD E-Mail JOHNROMMAN GED COMCAST. NAT Address _____Phone______6166_Date_31611 9. Name TENNY MONNISON SZZ GOUGH Address E-Mail MORRISON Phone 771-666 Date 3/16/11 DUNA 10. Name Address 2523 (DOUGH E-Mail

1. Name_DGUISE TOTH Phone Address 21 MOULTON ST SF 94123 E-Mail_ LIZ LA PORTE Phone Date 2-7-11 2. Name Address 3126 STEINER ST. 94123 E-Mail Date 2 3. Name DANA HANSEN Phone 7 GREENST #4 94123 E-Mail Address 232 Date 2 1011 4. Name HbM Phone 94123 E-Mail Address 3222 STPINON 5. Name Abdully Abn Asber Phone Date___ 94/23_E-Mail____ Address 3146 Steina St UBUN Phone Date the 6. Name ener 315 E-Mail Address HARRINGTON Phone 94123 7. Name_WALTER Date Address 3146 Steiner St _____E-Mail_____ Phone_____ 8. Name_MIKE FEFC Date E-Mail Address 2324 Reenwich ST Phone_____Date_ 9. Name e.c SC (A 9423E-Mail_ Address _____Phone_____ Date 2 ZNOS 10. Name_________ E-Mail Address , know

1. Name Klando August Phone 415-595-4489 Date 2/25/11 Address 1901 Comband St., SF. CA 9423 E-Mail Orlando. 94545 @gmail: Com 2. Name LOndyn Miller Phone 909-223-2008 ate 2/25/11 Address 190 MLcmbard St, SF. CA 94116 E-Mail Jonchnu Eagl. com. 3. Name Con 15 yan1 Phone 115-937-4366 2-26-11 Address 1671 Comburdet #95F, (194123E-Mail CoryaBryania gmuil, com 4. Name Delotic Rivard Phone 344-9481 Date 3-9-2011 Address 2362 North Point E-Mail_marinatits & yahor, a. 5. Name CHARLES BAIN Phone 415-922-4588ate 3-9-11 Address 2269 CHESTNUT ST SFCA 4123 6. Name CHARLESS HOLDEN Phone 41538 7878 Date 3.7.11 Address 2547 Filberr SF E-Mail Ruschtonde MUNDSpring. Co 7. Name DEN SEED _____Phone (415) 776-3647Date 3/11/11 Address ZZII FILBERT ST, ST E-Mail______ 8. Name_ Mare Crovel ______Phone ______Phone _______Date _____/[1/11 Address ZZII FILBERT ST, ST Address_ 302 Land St SF, LA 94118 E-Mail_ [CCMdd 6 mac. Con 9. Name 3/10 Greenwich Street Phone (415) 749-3551 Date 3/1/11 Address LUNY Vanegas- Grimaud E-Mail agrimaud 79@ hotmail.com 10. Name Malles Kosenberg Phone (150 0749461 Date 3/16/11 Address 545 Greenwichst HS E-Mail Narkers (a) Me. Wom Submitted by Christina C. Si

1. Name JOHN Phone 45/771-4771 Date 3 OUERI Address //// Janks ST. S.F. CA 94109 E-Mail Address ______ Address ______ Phone 510-99-5166 Date 2/2/4 for gull and ____E-Mail 3. Name John De Martin Phone 50-245-64 Date 5-4/1 Address 601 Stinn St E-Mail Bland 4000 Comany 4. Name PAUL FEMENNUCCU Phone #15239-1950 Date 3-3-2011 Address 434 OTSEGO Areve S.F. 94/12- E-Mail MENNUCCIO JUNO. COM 5. Name Douid Chay Phone 415. 330. 3143 Date 3-6-3011 Address 3130 Debster St. Apt. 22 E-Mail david, dchou Remail-com Address 3250 Lagany St. San Francisco, (A_E-Mail (Janhunt Offergmail com 7. Name_Michelle (1)/1/11 Phone_916-364-3109 Date 3-8-87 Address Bbg Ellis treet _____E-Mail_ 8. Name_ indsay Marthy Phone 415 816 (2331 Date 3/8/11 Address_2916 breenwith E-Mail Poor_Schlo Oyahoro car _____Phone_<u>415_384/18/__</u>Date<u>3-/8/1</u>1 9. Name_ D. Mikell Address Zalle Grenwich Si E-Mail 10. Name James Bishop Phone 415-997-9781 Date 3.9.11 Address 50 2016 Chestnut street E-Mail Jones, Bistope James, Bishop 6@T-Mobile.com mitted by the Alen

Kannedy Phone 921-4132 Date 2:25.2011 1. Name Address 3210 Fillmore St. SF. 94123E-Mail 209 5050548 Date 2 25 11 2. Name_SWhhie Henn 11 more (+ (F, GA 9412)E-Mail Address 3106 " Cas auth Phone 921 - 644 Date 3-25 3. Name Address 1787 Pulley St E-Mail Phone 45-562-2452 Date 2/25/11 4. Name_ E-Mail Address _____Phone_ A15.377, A5 85 Date 2/25/11 KON TELMAN 5. Name GRANWICHST, 94123 E-Mail ron 1972@grail.con 2085 Address Phone 563-1519 Date 2/25/11 to her 6. Name ____E-Mail__John Comphell@aol.com. FILMORE St Address Phone 710-0993 Date 2-25 7. Name 🛸 CA SF Address Phone 208-891-9571 Date 2-25-2011 GREEN 8. Name Hours E-Mail green thomas of agmail com Address 3115 fillmore st. 9. Name VERALAICOL SAE-UNG Phone 415 922-1977 Date 2-25-11 E-Mail VSA 928 1471 @ AOL COM 1994 LOMBARD ST Address 10. Name Johanna Vitocchell Phone 415-929-6884 Date 319/11 Address_ 2010 Chestnut St E-Mail NIA esmitted by Christma

We the undersigned are petitioning the Mayor, Board of Supervisors, Planning Commission, Board of Appeals, Dept. of Health against the application/installation of AT&T antennas/equipment proposed for 2055 Lombard St. garage. We feel there are alternate locations better suited for this microwave 9 antenna installation where at risk, challenged children at the Tule Elk School located behind the garage will not be impacted. This is a heavily populated residential, businesses, citizens area.

PARENTS

1. Name SUPRON MUKOMUP Phone 415-440-1263 Date 3-1-11 Address 3288 stines st S.F. Oa 94/23 E-Mail SUPRON @ Thai- massage. Com 2. Name BOONSONG BOATT Phone 415-939-3459 Date 3-1-11 Address 3228 stimer st, sf. CA all23 E-Mail browsnigstegrail-con 3. Name Michael Mac fourski Phone 187-410-7339 Date 3-1-11 Address 3518 UNION ST E-Mail 4. Name_ Aret Kuniferc Phone_415 915-8447 Date 3-1-11 Creenwich St_SFCA 97123 E-Mail_ Address 2235 5. Name____//) 6ANTNG Phone 45/596-362 Date 3-1-11 ____E-Mail_HCANTNIC Mit. Con Address_____ 6. Name MICHELLE HERNANDE Thone 415-420-1213 Date 3/1 Address 3130 Webster St. # 14, St CA 94123 E-Mail 7. Name Thir trugto Phone 15 567 9320 Date 3/3/11 Address 2141 christant E-Mail 8. Name ANGELINE BAFFORD Phone 415 793-0667 Date 3/3/11 Address 2280 GREEN STREET, S.F. CA E-Mail ABBHOMES DGMAIL COM 9. Name_Shannon Kelley_ Phone (415)441-633 pate 3/4/11 Address 2323 Fillmore St. SF, CA94123 E-Mail 10. Name Mary Eller Curran Phone 415 - 922 - 1938 Date 03-04 - 11 Address 3130 Websty St H7 SF Gig4123 E-Mail Mimimec 8@ 6 Mail Com Secomitted by Chru

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DAREN

_____ Date 2-19.11 1. Name Phone Addres E-Mail _Phone_<u>(77)_589-9609_</u>Date_<u>2-2(</u>-// 2. Name Oakland, CA E-Mail N Address NA Date 2-22-11 3. Name Phone Address E-Mail Phone 4/5 902 882 Date 2/2 4. Name Address 4-E-Mail _____Date_2/ 5. Name Phone (Address E-Mail PHNE 6. Name Phone 757 - 426 2167 Date 2/26/2011 Address E-Mail Phone 6766784168 Date R 7. Name E-Mail Clen (a) 20 01m 1hs (11 m 881 ompland Address 8. Name_Vicky Phone 415 922 - 2998 Date 3/1/1 Address 1956 Lambard St recynquyen 28 a Jahos, com 922-320 Date 3/1/2011 9. Name 11 FUF Phone 415 DIATES Address 33 E-Maild [Sbratt@ ykloo. (0)] 10. Name IRina Galafutnit Phone (415) 922-3220 Date 3/1/2011 Address 3309 Filmore St SF CA 94173 E-Mail 3 brandle

1.	Name MISSY BUNCh	_Phone_ <u>415</u> 5	18805 Date	2-12-11	
	Address		_E-Mail		
2.	Name anthony Bradly	phone	(′ Date	1	
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6.	Name Jo Manuel	_Phone	Dat	e 2/15/11	
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7.	Name Tael Connolly	_Phone	Dat	e 2/15/11	
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PARENTS

1.	Name Julianie Sanchez	Phone 415)771-262 & Date 2/8/2011
	Address	E-Mail
2.	Name Stanley chan	Phone 415 860 -2763 Date 2/9/11
	Address	E-Mail
3.	Name_LI, XIAOHONG	Phone (145) 533-4806 Date 21912011
	Address	E-Mail
4.	Name XAO HOWLET WU	Phone 410/081-783 & Date 2/9/00/1
	Address	E-Mail
5.	Name Mui CONG Phila	Phone 415-824-172 Bate 2/9/2011
	Address	E-Mail Phone_1415-308-2357 21912011
6.	Name QIU DIDMY 92-Mg	Phone 415 - 208 - 2857 219 107
	Address	E-Mail
7.	Name Meixan Wu	Phone <u>1415) 283 - 7536</u> Date <u>2/9/2</u> 011
	Address	E-Mail
8.	Name_HKERSK	Phone <u>9821047</u> Date
	Address	E-Mail
9.	Name SHATKH NASTRABANU	_Phone_ <u>2415*602-2316_</u> Date <u>02-9+11</u>
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DEWITCH Phone 415 310 17161 2/81 1. Name_\UMM 24 HVE, SF, CA Ille-Mail jendemick 4150 gmail.com Address 2. Name Kristika Itskovich Phone 415 404-2215 Date 29/11 Address 1725 Wastington #2, SF, CA 9409 E-Mail Krishke. Ftsico with agen 3. Name Maritza Arana Phone (415) 680-4238 Date 279/11 Address 759 41St Ave 4. Name ZERAY G WEDETC Phone Date QWZM 27 BYDANO. Cor Address 677-21AA AUS E-Mail 5. Name TONY CHAVES Phone 346 -7914 Date 2/7/2011 Address 2828 WEBSTER ST XIS E-Mail TONY CHANKES a HOTMAN COM 6. Name ACERED CHARK Phone 415 531. 294 Date 2/8/ Address 2420 GREEN WICH ST. E-Mail OSOME88 CTANGO, Com 7. Name Vara Freund _____Phone(415) 8219732_Date @2/10/2011 Address 906 Caroling S. apt. 3, SF-CAE-Mail yayafreunde hot mail. com 8. Name VIVI and Heroyo Phone 650 722 3676 Date 02/10/1 11) ST SF OA 94/01 E-Mail VARYOND838 gmolil. Com. Address 1976 25 9. Name Tatiang Leite Phone 300 773-3315 Date 02-10-11 Address 1553 Pershivy Dr SFCA 94129 E-Mail tattyc. Leik @ gmail.com 10. Name Tian Chi Huang Phone 45-567-7389 Date 02-10-11 Address 1542 Jackson of 6 S.F. Capping E-Mail_ ma CA

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and Phone 304521160 Date 2-10-11 1. Name_ ch leat E-Mail eet & well. com Address 7110 (acend -10-11 Berga Phone (415) S13 940 Date 2. Name MIRIAM Addresstal LUGUNA STAPJ SF CA-9462 E-Mail -- Nine 81022 er Phone 415 Date 3. Name E-Mail Veneerit nel Address Phone 810-222 Date 2 4. Name 1 ar. 01 ____E-Mail____ Address Phone 4/5-(090) Date 5. Name oremich 0 E-Mail Address Phone (45768-132 Bate 2-10-11 6. Name______ show 2110 Cremorch Address E-Mail Phone (415) 362-621 Date 2 7. Name MADY 62110 Genwich SF E-Mail Address Elena Aysin My Phone (415) 771-207 Bate 2/11, 8. Name SF____E-Mail Address 10 2110 Overwich melean Phone 415 722-173 Date 2 9. Name_/him Alleron St SF Address E-Mail _____Phone_<u>14(5)3</u>0 10. Name GREENWIST St Address 0184 E-Mail
1. Name Ornelia Mazeshel Phone 415-387-8748 Date Address 546 Fulton St. SF/CA94121 E-Mail 2. Name GING Oh Phone 415-931-0956 Date 2911 Address 2266 Washington Street E-Mail 3. Name Fran AL Wohamme of Phone 415 - 037 16 pate 2/9/11 Pavies Land E-Mail emoally Plubour Address 104 Rosa Phone <u>415-704-863</u> pate <u>2/9/1</u>1 4. Name Hebellin 1409 S.F.A94103____E-Mail Address 22 Phone 415-7242763 Freddie Haughatook 5. Name TSECA 94116 E-Mail STEVENS 415 VADO Address -MAN BURNS 6. Name Phone Date Pacific Ave SF. (12 94/37 Phone (40)571-9711 7. Name Address E-Mail Phone 451533-48-06 Date 2-10-11 8. Name XIACHONG CI Address/628 Kirkwood Ave. San Francisco E-Mail Phone 21, 5-819953 Bate 211 9. Name SUL DON Address 10. Name Ki Phone 749-357 Date 7-24-11 Address_ 2110 Greenwich St. E-Mail Siedmitter

PHONE 921-3915 DATE 2-13-11 1. Name Sarah R 250 255 ADDRESS 1916 Greenwich E-MAIL 2. Name for Boly CC, Phone 345-9599 Date 2-14-11 Address 1522 Com Gard Jt E-Mail 3. Name Mary Banacci Phone 921-3936 Date 2-14.2011 Address 15 Upulton Ste E-Mail 4. Name 5000 A Con Phone 513-3111 Date 2-14-11 Address Mbs Komber & St E-Mail _____Phone_<u>567-2535</u>_____Date_2-14-11 5. Name LAURIE NELSON Address 2073 REEAWICH E-Mail 6. Name CASEY NEGSON Phone 567-2535 Date 2142011 Address 2073 Greenwich St 9923-Mail 7. Name Tenning Man Phone 656-793-1017 Date 2/14/11 Address 2075 Grunwich St. SFLA 94123 E-Mail MON Phone _____Date 8. Name E-Mail-Address Date Phone. 9. Name E-Mail Address Date Phone 10. Name E-Mail Address In knitted &

1. Name Lish Vanlassel Phone 415-441-1842 Date 411/2011 Address 2039 Greenwich Street SF CH 94123 E-Mail Vantas Cellisa cychow com the wright phone 415563 5641 Date Hicker, BUSIN 2. Name Address 3200 Brehanan SR. E-Mail PIA Post Le Phone 229-1218 Date 2/12/11 3. Name Shapon Address 1699 PANYLEN SF 94109 E-Mail ShARON COCASTLETOP. Com Thomas Phone (760) 042-5686 Date 2/13) 2011 4. Name W. Kohin Address 2037 GREENVICH ST 94123 E-Mail RRTHOMASDIC YNNOCLON Phone 49-942-716 pate 2/12/11 5. Name HHRON 1 honason Address 2031 GREENWLUH E-Mail None Wass Phone 115-918-1158 Date 2 12 2011 6. Name Sillitze 3 Steenwork Al 9412 ZE-Mail NAX-Milk. @yehoo com Address_206 7. Name_/MMA DManndahone 115-693-9322 2/13, Address 3218 OCTAVIA St E-Mail None 8. Name 1/90 BACDASSART Phone 415-738-7064 Date 2/12/11 Address 62- PIXLEY SF 94123 E-Mail abaldassnai @paragon Ac.co. 9. Name MARY BACKESARY Phone 415-58-9670 Date 2/12/11 ____E-Mail_MMe YIXLE4 Address 64 LEEN CRAIN Phone 121-0925 Date-112 10. Name KATH 94123E-MailCraipie Scolopaly E Address

1. Name Myang Su Oh Phone 415-681-8431 DATE 2/15/204
Address 2259, 27th AVE S.F. CA9416E-MAIL OMS \$719 Photomail, com
2. Name <u>SHIJIN KO</u> Phone <u>415 - 564 - 1108</u> Date <u>2 - 15 - 11</u>
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4. Name CHUNG A KIM Phone 415 - 994 - 2352 Date 2.15.11
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5. Name Bong Myo Kang Phone 83/ -4780 Date 2.16 11
Address 4/18 Balboa StE-Mail
6. Name Micki Kim Phone 411-1881 Date FEB 15 2011
Address 1362 POST STREET 94109 E-Mail NONE
7. Name Pui WAN 10 Phone 986-8812 Date FEB15, 11
Address 614 KEARNY STREET E-Mail
8. Name PUN CHANG Phone 526-9147 Date 215-11
Address 1730 25th ST E-Mail
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11/11 Date 2 Phone# -1853 1. NAME Tolan Ogd.com nwichSt. ST E-MAIL ChibiVasumoto ADDRESS 2060 Alie 931-6554 Mineho (Mineko GaltAhonE 2. NAME_ BDDRESS 3218 Buckanan St., SF, CA 94123 Data 2/12/11 mone E-MAIL 3. NAME Ur. V. FESSE Phone +15 5630818 ADDRESS 2069 Filbert CA 94123 E-MAIL Date 2/14/11. 4 NAME NICOLE FESSEI PHONE 415563 CRIC ADDRESS 2069 FILBER Date 2/12 E-MAIL 5 NAME 1) MAR XIdv 16 phone 4 5972 (24 34 ADDRESS 12032 Dute 212.11 STELLIDICL E-MAN in mar 6 NAME DAWNY BERTARding Phone 563 7550 ADDRESS 2047 GREENwich 94123 MALLORA Dute 2.12.20 DERTAILET I 7. NANES DIALLY ALECONSTRUCTION YGUN ADDRESS DCS Flenerc E-MA Jute21 S. NAME FIT SWEENE Phonetker upscile construction ADDRESS 64 -7550 Dutes/12/ REELLIG 9. NAME Clockf LDON Phone 415 -921 - 8782 treenwich St ADDRESS 20 E-MAIL D. + &/// 10. NAME Eduardo Seromi Phone 4/15 - 370 4353 ADDRES 54 Houlton of S.F. CA. 94123 E-INAIL

1. Name belsey USWald Phone<u>619-213-5389</u> Date<u>2-7-11</u> Address 2133 Stockton St C204 SF 94133 E-MailKekey Oswald 619@ gmail. Com 2. Name Paige Johnson Phone 4159318302 Date 2.7.11 Address 2156 Chestnut, CA 94123 E-Mail Millig Phone 559 392 390 Bate 2/7/11 Panrele (3. Name Are #8, SFICA 94122 E-Mail Address 1219 47n _____Phone___<u>201-740-6976_</u>Date_<u>2</u>/2/ I can Marctarlan 4. Name____ Arouello Blud SF. CA94118 E-Mail troy mache la 119856150.00 Address 5. Name Richard Pulorin Phone Date 2/7/2011 CORFHANCORE CIR UNT B RITHON CITY 4 Address TOLLE COLORING STA COLORING 94065 E-Mail Phone Date 6. Name E-Mail Address Date Phone 7. Name____ E-Mail Address Date Phone 8. Name E-Mail Address____ Phone Date 9. Name E-Mail Address Date Phone 10. Name____ E-Mail **Address**

K. Tudisco Phone 415 9214985 Date Feb, 10, 2011 1. Name MKi Address 238 Moulton St. SanFrancisco E-Mail Yukik@ ergobal. com Will Phone 917-657-8730 Date 2/10/11 2. Name Nebsterst. #6 San Franciso, Nebsterst. #6 San Franciso, CA 94123 E-Mail Kelly22181 Cogmail. Com Address 31 3. Name_ Robert Brodsky Phone (650) 759-887/Date 2/11/11 Address 1926 Lombard St. E-Mail mesol 30 Dasl. com 4. Name OMM 100/11 Phone 650 303 6017 Date 2/13/2011 Lombard St-SF E-Mail S. del - bucchia@yohooxon Address 19 110/301 Phone 650 303 3021 Date 2/13/2011 5. Name 1av Address 175 Reduced Are E-Mail byrd 8/21@ yahoo. com ONALD Phone 1553/3029 Date 2/13/2011 6. Name_Tim Mcl. Address 1926 Lombard St E-Mail FSMcdohuld 33 Cameriles 7. Name Unicent J. MALONE Phone 415 776 Ett Date 2.12.11 Alb3 Address 26 TAYlow Vallejo, CA E-Mail NONC 8. Name ALDONNA J. CARICO Phone 347-1452 Date FEB 13, 2011 Address 2725 BREADWAY E-Mail 9. Name LAUREL CALSON, Phone 415-3460518 2/ Address 3130 WCBSTER # 24 E-Mail DA LCALSONIOYALOU. 10. Name 1111NE BLITZER Phone 415-929-6988 Date 2/22/11 Address 3130 Webster #29 E-Mail Lebrutted

Date: 2/10/2011 Phone # 415 902-2772 1. NAME Ramon Craveia Granwich St. SF E-MAR ramon eramon jave a 2037 ADDRESS _ 2 NARE Shiresn Alshar ADDRESS 2057 Greenwich Sr SF Dete: 2/10/2011 E-MAIL 60CDSTEIA DET MARCI H 2/10/2011 3. NAME 415 is Reen Will ST. Ð ADDRESS_ Michael PHONEH (415)921-5520 Teres 4 NAME ___ Det= 2/11/2011 ADDRESS 3100 Webster Street SF. (A 94123 E-MAIL Mpczer-(e) Lauhar Hality com 3100 Webster Strept Phone #(415/370-1450 Date 2/11/11 5 NAME ADDRESS MICHELE SEMICK E-MAIL GSEWICIC@YARDO, COM 10. NAME FAFANOR HRADER PHONES(415) 546 6262 Date 2/11/1 ADRESS 2058 Trees mich Dt E-MAIL ELLIESJOY @ AOL CER Phones 415-9230918 Dute 2/12/11 YANGS tunka 7. NANE-E-MINIL TANKENS @SPLADER. OKG HDDVESS Phone # 415-265-9334 & NAME MAtus Date 2/12/11 AVATA - Anonaus (a) ADDRESS. E - MAIL MCAST.NET Phone 415,765934 Dute 2/12/11 9. NAME E-MAIL MARS B. CAWCAST 10-MAME IN ontri Phone LIIS 56307 Ven E-MACH ULEWIFILE MALUTO

Phone 143-1580 I NAME REUVEN ITECMAN Dete 2/11/11 E-MAIL ritel @pac bell. het ADDRESS 2111 Greenwich St 2 NARE Zehavy Helmes Phones 929-1997 Date 2/11/11 E-MAIL Zitelman & gMAIL. com ADDRESS 2111 Green wich st Phone 377-4585 Date 3/1/1011 2 NAME RON ITELMAN ADDRESS 2085 CREENWICH ST 94123 E-MAIL RON 1972 @ SMAIL, COM 4 NAME LICEN BOIDCHIFEP _____Phone # 915-265-0214 Date 3/11 ADDENSE 3075 Greenwhichst. SF, CA 94/23 =- MAILIAN Rad life (2) gong il. Can 5 NAME Reberca Barker Phone 415-420-3810 Date 2/11/201 ADDRESS 2017 Greenwich SF(A E-MAIL bec. barker agmail. com 6. NAME LORI VANTLASSELL Phone 4/15-32441-18+2 Date 2/11/11 ADDRESS 2039 GREENWICH ST. SECA 94123 E-MAIL OUDUR 1019 Q Vahoo, COM 7. NANE Rhonde 922 3452 MILP PHONE Dute 2/12/1 ADDRESS 3041 Buchman St SFOA 941312-MAIL Rhouldling pachelling SNAME Craig Barber Phone 415 3 85 7816 Date 2/12/1 ADDRESS 2032- Greenwich St. A. (A 94123 E-MAIL barberck@hotmail.com 9. NAME Vince PHONEN 408-507-6540Date 2/12 ADDRESS. 2040 Granvich ST E-MAIL Vapor Al angil 10M 10 MANE Callie Maguire PHONE 303-250 5699 DATE 2/12 ADDRESS ZOAD Greenwich Street E-MAIL Callie Maguire Cgmail. an ubmitted by

ADWAX Phone 115-673-74 Date 2-4-41 1. Name R. SHALL Address 1990 FILBERT #4. 04123 E-Mail GUZELIAN Phone S.F. 94123 Date 2-4-11 2. Name Gus GREEN ST. Address 843 E-Mail ____Phone <u>4/15 244353 Bate 2 6</u> 11 3. Name GUS CALIFORNIA ST ____E-Mail__<u>94/0_9</u> Address [63] Phone 925 - 360-5899 Date 2 -6-11 armor 4. Name a 44572-Mail Norcalkha con cash net 39B 11 aranap dec Address 11 _____Phone_923-1276 _____Date_2/7/ 5. Name_KEVIN DIU E-Mail <u>keningdillehotmail</u> com Address 20Ale Greenwich Phone 923-1276 _____ Date DILL 6. Name CATY E-Mail Cathy edillo hotmail - com Address 2046 Greenwich ubbar Phone_ 7. Name_ rend ratt i **F-Mail** Address Date 8. Name E-Mail Address Phone / Date 7 9. Name E-Mail Address 2.9.2011 affierst propene Date 10. Name E-Mail_none 94123 Address 217 eenwi

Borchie L. Cerling____ Phone 74-0938 ____ Date 2/6/11 1. Name Address 327 AVITA St. S.F. CA 9-11 23 E-Mail NOILE 2. Name Auto Turol Phone 921-4985 Date 2/8/11 9KI Address 238 Mounton St SF. (1 99123 E-Mail antonio Dergobal. com 3. Name Albert Wong Phone (4/5) 885-2352 Date 2/8/11 Address 32/8 Fillmure St. E-Mail None Jordon phone 45-664. 70 34Date 2/8 4. Name Marlal Phone <u>8312387528</u> Date 1/10/11 Backbal. Vet Address 207 Downey At X. 7 94117 Mail Margarel - go Tess Corditer Address 2030 48th Are SFCA 94/16 E-Mail Contessa 23 @adloco _____Phone___<u>415-929-888</u>Bate Z/10/ 6. Name_JOSED/11/10 1 HUD ST CA 94/22 E-Mail pharie @ pachell. Rel Address 1200 15 th NE N. FHEDI Phone_ _____Date_2/10/ 7. Name IRF Address 2018 10M 6 MV St ST CA 94/2 MTail Phone 415 - 931-980 Date 8. Name LOMBARD SI E-Mail Rosanelli Education Address 64Ming Phone 415-242-6267 2/10 9. Name MIC E-Mail MOSOBOED GOL COM Address 1926 (mbard 6 10. Name James Guming Phone 650-271-124 2/10/2011 Address / 926 Lombard St E-Mail MeSol 30 @ 90/, COM

halley Phone 415 921 1168 Date 1. Name chestrut E-Mail Address Kirsten Colaber phone ____ Date 2 2. Name restrut E-Mail Address Phone 415-885-4000 Date 2, abens 3. Name E-Mail InFOCESWSK Faumone ST. Address 31 CONSTRI__Phone__ 4. Name aol. com 54+11mue _____E-Mail_/ Address 5. Name Kachel Phone 661 917 1951 Date 2/10/11. Address 2335 E-Mail meintospillegmail com Painta Ave MML_Phone_415-272-1999 Date_2/16/11 6. Name pret E-Mail colleenehuntognail.C. Address 121665 Phone 415567-06 Date 7. Name St E-Mail Tineke (BDL, Com 10 Fillmon Address 2 south Phone 567-0602 Date 2/10/2011 8. Name E-Mail Scanne artisticosi Imore St Address _____Phone567.0602 Date 10 9. Name (E-Mail Mu Ordergo threes t horco Address Phone 411-6065288 Date 7/10 10. Name_phil Relielle poters pizza com. mive E-Mail Address

1. Name_Veronica OBoyle Phone 415-4941372 Date 2-3-11 Address 1800 Chestnut St. SF (~ 94123 E-Mail Vermicaoboyle Chatmail.com 2. Name l'e Challow Phone S(07 266) Date 23,01 Address Queen - Filberil St E-Mail Name Ful Parker Phone 415-602-083 Date 2-13-11 Address 2672 Chostnut St SAN Frence 494122 E-Mail Bradh & Genrage 3. Name PGUI Parker 4. Name Moti ClumbigH Phone (1914 Childred Obios Address 2106 CheStNUT St DORA OINPRES E-Mail _____Phone_____9 1259 Date 2 5. Name Janie & Jack E-Mail DOINARS 556 9Mail CONI Address 2108 CHESTINT ST 6. Name LEMSON PIPE Phone 415 4091759 Date 217/11 Address 2008 Cushert of E-Mail 7. Name (ASSIL HANSON _____ Phone @ 441-6727 Date 2/7/11 Address 2124 Chestnul St. SF CA 94123 E-Mail Sanfrancisco atwoskints. nut 8. Name France Gouver Phone Date 2/18/ Address 1867 Chestmin E-Mail 9. Name Phone Date Address E-Mail Phone Date 10. Name Address E-Mail

aniel Vart a Phone 921-2867 Date 02/07/ 1. Name Address 2165 Lombard ST Sf Ca E-Mail 2. Name_Chris Pottar Phone 345 1377 Date 217 Address 3330 Steiner st. SF. Ca E-Mail 3. Name Flence Schelidlik Phone (415)819-780 Date Address 3344 Steiner 8t. St CH E-Mail eleux barney (a 4. Name Imena Kink Phone 415)265-9214 Date 2/7/118 model . e Address 3341 Steiner St. SF, CA E-Mail IMENG_Sj2@hotmail.com 5. Name Michael Finnie Phone 1157106086 Date 171 Sterner St_____E-Mail Micheel@Hepkintafe com Address 3352 ARCIA Phone 775-3423 Date 2/7/11 6. Name__UCE E-Mail MICHAEL CCHAL OCONCAST CHESTNUT Address 2008 NET (OR CO _____Phone 11 2179269 _____ Date____ 7. Name 1918 Maleco _E-Mail_agie_latgirl@yehost. 9134635 Date_2/7/11 Address 2072 aughter HJSF Phone 201 8. Name OANIEL FERMAN Address 635 LYON ST E-Mail Phone 922-400 9. Name unnel 10 Den 10 E-Mail 150500 10. Name_ PAN _____ Phone Address 2120 CHESTNUT ST 14123 E-Mail . kmillo

impacted. This is a neavily populated residential, businesses, citizens area.
1. Name Camule D Siba Phone 928-4687 Date 1-31-2011
Address_ 31030 Wetster St, SFCH 94193 E-Mail
2. Name Jo SEPH CollEGE Phone 415-782-9238 Date 2/3/11
Address 3130 WEBSTER STREET #26 E-Mail JVCNAC BRACBELL, NET
3. Name Nemy Main Call Phone 12-77 Date 2/3/11
Address 3130 Webster STARY Apt 26 E-Mail VEMER Afterbell WET
4. Name Rebacca Schramm Phone 415 254903 State 213/11
Address 3130 Vebster #21 99/123 E-Mail
5. Name Oery S-term Phone 415- 21-5520 Date 2 4
Address 3100 Webster 57 E-Mail
6. Name_ Rebin Pelet Phone_ 921,552 Date 2/4/11
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7. Name Chitore Manune Phone 129-1853 Date 2/4/11
Address 2060 Greenwich ST E-Mail while biyes white Guelicon
8. Name MILDRED NEBS Phone 415-771-1294 Date 214/11
Address 2063 GREENWICH 94123 E-Mail New Mikking yohoo Com
9. Name_Stephen Karl Phone 975-384-8041 Date 2/4/11
Address 3130 Webster St. # 23 E-Mail Start 785 mail. com
10. Name EiniLie BERNARCINI Phone Date 2-7-11
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Phone 650.274.5000 Date 1.31.11 LEU 1. Name Address 2126 (OMBINCI) JOCKIT E-Mail llen suprela yatoo.con 2. Name Maura Mucheling Phone 9 31-912+ 9 Date 2- 3-11 reenve E-Mail Address 18 Phone 4/074/0-590 Date____ 3. Name 7 mm Grunwig Address 2 Phone 4. Name Date reenwic Address & E-Mail 77/-6043Date_2-3-5. Name 😳 _____Phone<u>// S</u> Address 1850 E-Mail Phone 415 6732477 Date 2-3-11 munu 6. Name Mulle Address 2942 E-Mail -6100 Date 7/3 Phone -7. Name rd. On E-Mail March Address 350 Date 2/3/11 Phone⁽⁴⁵) BIC344 8. Name 3211 NIR E-Mail Address Date 2 3 Phone 9. Name Address 5044 E-Mail Date Phone 43 10. Name Address E-Mail

Phone 415 7495900 Date 1/31/11 1. Name 2135 Gunbary St. SF GA PHILS E-Mail XIJAME 80 SMPSLAW, Com Address 2. Name Maurin Gabler Phone Date 1/31/14 Address 2145 Lombard St. SF CA 94123 E-Mail Mayrenn & gonil.con _Date_ 2/1 Phone 3. Name Augles My-ken SF 9412 JE-Mail dmy-ken@smdilaw com Address 2135 thank ____Phone______Date___///// 4. Name Address 2135 Lombard St. SF 94123E-Mail Warde & Sindi law com 10/1/2011 Phone 749-5900 Date 2/1/2011 5. Name 26 9/01/01 Address 2135 Londard St, SF, CA E-Mail Flerchmane Smillan co 6. Name SUSAN ABBOTT Phone W Date 2[1/1] Address 1906 Ocean avenue, #7 E-Mail SUSanquesan@yahoo.com Jun Pelazo Phone Mg-5900 Date 2/1/1 7. Name lumleard St. JF. 049412-Mail Address their Phone 775-8950 Date 2/21 8. Name 35 Lound St _____E-Mail_ Address 9. Name Scigid Katselis Phone 415 378 2607 Date 2/2/11 Address 2135 Loopbord St SF, CA 94123 E-Mail blcatselis @ Smd law. com Christina E. Slout Phone 45-922 -5602 - 2/1 16 St E-Mail<u>ZAUTUMN</u>MIST24/@MS. Address 3/ 3 CON

We the undersigned are petitioning the Mayor, Board of Supervisors, Planning Commission, Board of Appeals, Dept. of Health against the application/installation of AT&T antennas/equipment proposed for 2055 Lombard St. garage. We feel there are alternate locations better suited for this microwave 9 antenna installation where at risk, challenged children at the Tule Elk School located behind the garage will not be impacted. This is a heavily populated residential, businesses, citizens area.

3900 Phone <u>415-922-</u> Date 01/31/11 1. Name JAY LAVERI Address 2230, LOMBARD, SAN FRANCISCO, CA.94K3 E-Mail GravelodgeSF@gmail. COM 2. Name DEREK TAILOR Phone 740-7127 Date ON 31 11 Address 531 6 ERRERE Apt 2 SE CA GUILO E-Mail Daviking Quail C.M Phone 415 752-6212 Date 131 2011 3. Name Melanie Shain 9th ave SF Ca. 94118 E-Mail melanieshain@ prodigy net Address 272 PEREZ Phone 415 929 228 Date 131201/ 4. Name MARIO GRIMSBY SAN JOSE E-Mail 4424 Address Phone 415,652.9005 Date 1 5. Name Austin acy King 51 BH194 Address Phone (707) 363 1055 Date_ 6. Name N Dr. Berkeley CA E-Mail mokranim @ymail.com Address_ Phone 4152 695 4595 Date 1 13-1/2011 Cane 7. Name main hong & gmail. co 43° AVF SE (A 941.16 E-Mail thao Address 2646 Phone <u>115) 346-4151</u> Date <u>01-31-2011</u> 8. Name Tamous S.F. (A.94122 E-Mail Address n Date / / 3/ PULLIV. Phone 9. Name ADNEI O hot UNAIL. COM F-Mail Addres -CWN Phone 567-0646 Date 10. Name E-Mail Address

Phone 474-2253 Date 73 lavel 1. Name A Star 2109 Chestwetst E-Mail Michele basus peakesla, Address U 2. Name Megan Olean _____ Phone 474 2253 ____ Date 3111 Address 2109 Chestmut st E-Mail Mugano PSUSIe (akesla, com 3. Name KIM TEXACI Phone 415-922-2526 Date 13111 Chestnut ST E-Mail FIMI 674/ayaha (in Address 2085 _____Phone______Date_1131111 4. Name Address VC7 E-Mail Mphill Phone Date 1/31/1 5. Name Address 2025 ChestNUT, SF E-Mail ASEAlliANCE @ YA hodi COM _____Phone______Date______ 6. Name E-Mail Address Morry Phone_____ Date 1/31, 7. Name Chartnut st. E-Mail Address 2015 _____Phone______Date__(21 Nail ioud 8. Name 2632 E-Mail Address RAT Phone 4(5-567- 2124 130 9. Name E-Mail Address 609 5213 Date 1/31 RUNLIG WER Phone 415 ANNA 10. Name Address 2066 CHESTNERT E-Mail 94123 VF. CA U.b.m.

VOLUME NO 4

A.T.+T. Proposal





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AT&T to buy T-Mobile USA for about \$39 billion

From the Associated Press March 20, 2011

NEW YORK

AT&T Inc., the country's second-largest wireless carrier in the United States, on Sunday said it will buy T-Mobile USA, the fourth-largest, from Deutsche Telekom AG in a cash-and-stock deal valued at \$39 billion.

AT&T will pay about \$25 billion in cash and the balance in company stock in a deal that gives Deutsche Telekom about an 8 percent equity stake in AT&T.

T-Mobile is coming off of two years of flat revenue as it struggles to compete with much larger rivals AT&T and Verizon Wireless. Bellevue, Wash.-based T-Mobile USA's subscriber count has stalled at just under 34 million, though it posts consistent profits.

There have been reports over the last year that Deutsche Telekom has been looking at radical moves to let it get more value out of its U.S. holding, including a possible combination with Sprint Nextel Corp. or some other U.S. partner.

AT&T said in a statement Sunday the deal gives it an "optimal combination of network assets" that adds capacity sooner than any other alternative. It also said the deal will improve network quality for the customers of both companies and increase the number of cell towers by about 30 percent in some of its most populated areas.

The deal has been approved by the boards of both companies, but will likely face tough scrutiny from regulators. Dallas-based AT&T can increase its cash portion by up to \$4.2 billion, with a reduction in the stock component, as long as Deutsche Telekom receives at least a 5 percent equity ownership interest in the buyer.

AT&T will finance the cash part of the deal with new debt and cash on its balance sheet and will assume no debt from T-Mobile.

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THE NEW YORK TIMES BUSINESS THURSDAY, MARCH 31, 2011



Cellphone Radiation May Alter Your Brain. Let's Talk.

By KATE MURPHY

In a culture where people cradle their cellphones next to their heads with the same constancy and affection that toddlers hold their security blankets, it was unsettling last month when a study published in The Journal of the American Medical Association indicated that coing so could alter brain activity.

The report said it was unclear whether the changes in the brain — an increase in glucose metabolism after using the phone for less than an hour had any negative health or behavioral effects. But it has many people wondering what they can do to protect themselves short of (gasp) using a landline.

"Cellphones are fantastic and have done much to increase productivity," said Dr. Nora Volkow, the lead investigator of the study and director of the National Institute of Drug Abuse at the National Institutes of Health. "I'd never tell people to stop using them entirely."

Yet, in light of her findings, she advises users to keep cellphones at a distance by putting them on speaker mode or using a wired headset whenever possible. The next best option is a wireless Bluetooth headset or earpiece, which emit radiation at far lower levels. If a headset isn't feasible, holding your phone just slightly away from your ear can make a big difference; the intensity. of radiation diminishes sharply with distance. "Every millimeter counts," said Louis Slesin, editor of Microwave News, an online newsletter covering health and safety issues related to exposure to electromagnetic radiation.

So crushing your cellphone into your ear to hear better in a crowded bar is probably a bad idea. Go outside if you have to take or make a call. And you might not want to put your cellphone in your breast or pants pocket either, because that also puts it right up against your body. Carry it in a purse or briefcase or get a nonmetallic belt clip that orients it away from your body.

Some studies have suggested a link between cellphone use and cancer, lower bone density and infertility in men. But other studies show no effect at all. Given the mixed messages and continuing research. Robert Kenny, a Federal Communications Commission spokesman, said in an e-mail, "As always, we will continue to study this issue and coordinate with our federal partners."

The phone used in Dr. Volkow's study was a Samsung Khack, model SCH-U310, a flip phone that was in wide use when she began planning her experiments two and half years ago. But'today's ubiquitous smartphones emit even more radiation as they transmit more, and more complex, data.

You can get an idea of the relative amounts of radiation various cellphone models emit by looking at their SAR, or Specific Absorption Rate. This number indicates how much radiation is absorbed by the body when using the handset at maximum power. A cellphone cannot be sold in the United States unless an F.C.C.-approved laboratory says its SAR is below 1.6 watts per kilogram. In Europe, the maximum is 2 watts per kilogram.

The SAR number is not displayed when you compare cellphones at your local wireless store, and trying to find it in the fine print of your user manual is an exercise in frustration. The F.C.C. maintains that SAR values "do not provide sufficient information" to reliably compare cellphone radiation emissions because certain phones might rarely operate at maximum power. Still, the Environmental Working Group, a nonprofit organization, has a comprehensive list of the SAR values for most cellphones available from major carriers on its Web site. (For instance, the Apple . iPhone 4 is listed at 1.17 watts per kilogram, the Motorola Droid at 1.5 and the LG Quantum at 0.35.) you are moving rapidly — say, in a car or train — it must repeatedly issue little bursts of radiation to make divised band

But more important than looking for a low-SAR phone is how you use it. Many cellphones emit the most radiation when they initially establish contact with the cell tower, making their "digital handshake." To reduce exposure it's best, to wait until after your call has been connected to put your cellphone next to your ear.

During the ensuing conversation, it's advisable to tilt the phone away from your ear when you are talking and only bring it in close to your ear when you are listening. That bit of teeter-totter works because the emission of radiation is "significantly less when a cellphone is receiving signals than when it is transmitting," said Lin Zhong, assistant professor of electrical and computer engineering at Rice University in Houston. Moreover, your cellphone emits less when you are stationary because when you are moving rapidly — say, in a car or train — it must repeatedly issue little bursts of radiation to make digital handshakes with different towers as it moves in and out of range. (More cause to hang up when you buckle up.)

Want another reason to complain about your carrier's poor coverage? Any situation where your cellphone has **a** weak signal indicates it has to work harder and thus will emit more radiation. "Fewer bars means more radiation," said Om Gandhi, professor of electrical engineering at the University of Utah in Salt Lake City. Inside buildings and elevators, in rural areas, the Grand Canyon — these are not good places to make a call if you're trying to reduce your exposure to radiation.

Of course, parents using their iPhones to pacify cranky kids might want to reconsider rattles. <u>Children's</u> <u>developing</u> brains and tissues are thought to be most vulnerable to cellphone radiation. Health authorities in



CENTER, APPLE, VIA EUROPEAN PRESSPHOTO AGENCY, RIGHT BRENDAN MeDERMID/REUTERS

The Environmental Working Group lists the Specific Absorption Rate (or SAR, a measure of radiation) for the LG Quantum, left, as 0.35 watts per kilogram; the iPhone 4, middle, as 1.17; and the Motorola Droid, 1.5.

ONLINE: PERSONAL TECH

This week's Web features include Gadgetwise posts on the new HTC Thunderbolt, the first phone using Verizon's LTE network, tips on how to photograph food and high-tech kitchen renovations.

ILLUSTRATION BY THE NEW YO'K TIME

nytimes.com/gadgetwise

Britain, France, Germany and Russia have all issued warnings against allowing small children to use cellphones for extended periods, if at all.

There are cellphone attachments that purport to shield users from radiation, and most are "hoaxes," said Mr. Gandhi. Beware of pendants that sellers claim snatch radiation from the air. Pong Research offers a cellphone case for iPhones and BlackBerrys that it says has been shown by an F.C.C. approved testing lab to redirect radiation from the phone's antenna away from the head.

While the manufacturer says it reduces radiation more than 60 percent, some electrical engineering experts question whether the case may have the opposite effect at orientations where your head is in the way of the cell tower because your phone may have to increase its transmission strength somewhat to compensate for the redirected signal. The company disputes this. Nevertheless, the net effect of using the device throughout the course of the day may be a reduction in total exposure.

Texting, instead of talking, might be safer. "The whole trend toward texting instead of talking on cellphones is probably a good thing," said Mr. Slesin at Microwave News.

That is, if you don't rest your cellphone against your body while typing out your message.

AT&T, T-Mobile hung up in dispute

City officials take issue with antennas' placement, size

By John Upton Examiner Staff Writer

Two cell phone companies' efforts to improve mobile services were slowed after city officials allegedly discovered permit violations.

The City stopped issuing the permits to AT&T and T-Mobile that are needed to install new cell phone antennas after ruling that four of the devices violate conditions.

The antennas were either larger than those approved for installation or placed in the wrong positions.

"We can't approve any further installations until they are corrected," Planning Director John Rahaim said.

The companies are allowed to continue installing antennas that have already been approved and they will not be fined if they fix consider legislation the problems, according to Rahaim.

T-Mobile antennas that violated permit conditions were discovered at 420 Bush St. and 2696 Geary Blvd., according to City Planner Jonas Ionin.

The antennas were installed by Cingular, which AT&T acquired in 2005, and they will be adjusted to comply with permit conditions, spokesman Rod Delarosa said.

AT&T expanded and modified antennas

at 1763 Stockton St. and 268 McAllister St. without securing needed permits, Ionin said. "The City did bring these two sites to our attention, which we greatly appreciate," AT&T spokesman James Peterson said. "We'll remedy the situation as quickly as possible." Such antennas are being rapidly deployed

throughout The City as the nation's biggest telecommunications companies scramble to keep up with cus-

tomer demand for data services. But, many residents object to the devices, saying they are dangerous for human health and unappealing.

A Planning Commission hearing to that would crack

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down on the installation of unattractive antennas in public places, including utility poles, was postponed Thursday.

Under the legislation, introduced by Supervisor John Avalos, cell phone companies could plant trees to disguise the antennas in order to secure needed permits.

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Static: City residents have complained about efforts to put more antennas around town, saying they are unappealing and present health hazards.

LOCAL NEWS 'Kleptomaniac' returns to court

By Mike Aldax Examiner Staff Writer

He called himself an "art collector," but, according to authorities, "kleptomaniac" is a more appropriate term.

Art connoisseur Terry Helbing, 53, returned to court Thursday for a preliminary hearing on charges that he nabbed dozens of artworks from various galleries, studios and libraries. * Police arrested Helbing in June at the Helen Crocker Russell Library of Horticulture at the Botanical Garden in Golden Gate Park.

A worker there had recognized Helbing from a burglary in April in which about \$15,000 worth of art was stolen.

Following his arrest, police served a search warrant at the Cambridge residential hotel, 473 Ellis St., where Helbing Supposedly lived, and they recovered dozens of paintings and rugs, along with other small pieces of art.

Helbing pleaded not guilty to felony charges of grand theft, burglary and possession of stolen property June 4, prosecutors said. The District Attorney's Office said it has tacked on an additional 38 felony counts:

He remains in custody. The hearing was continued and will resume at 9 a.m. today. maldax@sfexaminer.com

Staff Writer Brent Begin contributed to this report.

FRIDAY, AUGUST 13, 2010 sfexaminer.com THE EΧ AMINER Tuesday, March 5, 1996

New PCS phones beat cellular system in quality, cost

BY WALTER S. MOSSBERG Was theel southas

Normally, this space is occupied by a discussion of personal computing, because the computer is both the most important and the most confusing form of personal technology. But there are other interesting new technologies meant for individual use, so every

now and then, it makes sense to focus on one of

Lately live been trying out the first of a new breed of wireless phones, a technology called PCS, or personal communications systern, designed to com-

Unem

pete with cellular phones. These new phones aren't compatible with current cellular-phone networks, but companies have been lining up to pay the Federal Communications Commission billions of dollars for the right to build and operate PCS networks in cities around the country.

The technology is so new that there's only one region so far where you can buy and use PCS phones the Washington/Baltimure area. There, a PCS service called

[2] Comparison of Stationary and Stationary and

Sprint Spectrum was launched in November by a company called American Personal Communications, which is partly owned by Sprint.

After using a PCS phone in and around Washington for a couple of months, my verdict is that it's superior in nearly every respect to a cellular phone, with better call quality and greater security.

The new phones also include a host of built-in features even with the cheapest rate plan, such as numeric paging right on the phone's screen, free voice-mail service, free caller ID and no charge for the first minute of any incoming call. Not only that, but they're less expensive for many, if not most, types of users. There's no activation fee, no service contract of any kind, no penalty for dropping the service.

Only one city

In fact, there's only one significant drawback to a PCS phone: Because there is only one city so far with PCS service, you can't use a Sprint Spectrum phone if you travel. But the vast majority of current cellular-phone users don't take their phones out of town, and in any case, other big cities are due to get PCS phone service over the next three years, extending the reach of the phones.

Both the PCS phone itself, and the basic structure of the network, seem similar to the cellular system at first glance. Like cellular phones, PCS phones operate by transmitting and receiving wireless signals within a grid of small base stations around town that are tucked out of sight. The phone I've been using, a \$199 model from Nokia, is indistinguishable on the outside from common Nokia cellular models.

But there are key differences below the surface, Unlike most of the U.S. cellular system, the PCS system handles phone calls as a stream of digital bytes, just like a computer handles data. I found these digital calls to be clearer, with much less static and fading, even in a car or inside most buildings. Dropped connections were also rare, as were failed attempts at dialing.

My only complaint with the Nokia phone I used was that sometimes the microphone picked up too much background noise. And the phone is just as cryptic and difficult to program as your typical cellular phone.

Calls in this digital format can't be overheard with the kind of simple scanners now used to eavesdrop on cellular calls. Eavesdropping is technically possible, but it requires special gear and technical skill, which most eavesdroppers

lack. Similarly, the phone number and other data which a PCS phone broadcasts about itself are encrypted, so crooks can't just pluck this information off the airwaves and steal it, as they do with common cellular phones.

Unlike cellular phones, PCS phones are sold like any other electronic device: You buy them at the store and activate them yourself, by dialing a built-in phone number. That's easy and cheap, but it means nobody is throwing in phones at low prices to induce you to sign a contract. There are only three PCS phone models - Nokia, Ericsson and Motorola - available in Washington. These models are small and advanced, and cost from \$150 to \$200.

Aggressively priced

At least in Washington, the PCS service itself is priced very aggressively. Even the cheapest Sprint Spectrum rate, at \$15 a month, includes all the built-in PCS features, plus 15 minutes of free airtime usable day or night. Extra airtime costs 31 cents a minute.

By contrast, Bell Atlantic Nynex Mobile, Washington's leading cellular carrier, offers far less for \$15 a month. Its plan doesn't include any free airtime, paging.

voice mail, calter ID or free incoming mus utes. The cellular plan requires a \$20 activalion fee and a two-year contract with a \$175 termination penalty All outgoing calls can cost at least 35 cents a minute. and up to 99 cents a minute, detenditud on where you are in the metro area

Telephone price companions are com plex, and depend on how people use the services My sense, however, is that even with more common plans costing \$40.01 \$60 a month, the PCS phones in Washing ton are a better deal than cellular when you consider all the features

The feature and security gap between PCS and cellular service will surely narrow, as standard cellular companies plan to convert more of their networks to lian die digital data and to offer things such as built-in paging. What's more PCS could be limited by incompatibilities between cities, because there are three different. PCS technologies that comparises plan to use

But for now, most cellular customers who don't travel much would do well to take a serious look at PCS phones when they hit your town

Walter Mussberg writes the personal tech nology column for the Walt Street Journal



Technology

CITYYHALLWATCHI THEEX 6-16-10 Cell phone sellers ordered to disclose radiation risk

By Joshua Sabatini Examiner Staff Writer

Sellers of cell phones in San Francisco will now be required to disclose radiation levels the devices emit.

As the debate continues about whether cell phone use poses health risks, Mayor Gavin Newsom said consumers have the right to know the radiation levels of the devices they use.

Newsom's legislation mandating the disclosure of radiation levels of cell phones sold in San Francisco was approved in a 10-1 vote Tuesday by the Board of Supervisors. Supervisor Sean Elsbernd opposed it.

The requirements of the legislation will be phased in beginning in September. By February, chain stores selling cell phones must display how much radiation each device emits at the point of sale, Other stores have until February . In an II-0 vote, nonresident fees 2012.

out against the requirements and businesses expressed concerns about the mandate.

"We are pleased the board supported what we always maintained is a common-sense, and, we think, quite-reasonable measure to provide greater transparency and information to consumers," Newsom spokesman Tony Winnicker said. "This is not about discouraging people from using their cell phones. Nobody loves their iPhone more than Mayor Newsom.

"It's about providing consumers the same information that the cell phones companies are already disclosing to the federal government."

Businesses will face penalties of up to \$500 for repeat violations. Cell phones are regulated by the Federal Communications Commission, which considers them safe.

The board will take a final vote on the legislation next Tuesday. 1.25

IN OTHER ACTION

to play the links at Harding Park Cell phone providers had spoken Golf Course increased \$15. Weekday rates go from \$135 to \$150 and weekend rates from \$155 to \$170. jsabatini@sfexaminer.com

School district sees cell phone A antennas as revenue generator

By Andrea Koskey Examiner Staff Writer

More of San Francisco's public schools could become sites for cell phone antennas, a potential revenue generator, with the controversial equipment already installed at two schools.

In July, the San Francisco Unified School District entered into one-year contracts with Cingular Wireless, now AT&T, and received \$48,410 for each school site.

The district's real estate office has been approached by cellular companies to possibly increase that number, according to district spokeswoman Gentle Blythe, who did not say how sites are being considered.

No decision has been made on the requests, but last month the Board of Education's Building Grounds and Services Committee asked district staff to provide more information about equipment that would be used, including whether there would be harm to students and staff as a result of hosting a cell tower.

An informational item about the potential revenue from the antennas is on tonight's school board agenda.

Doug Loranger of the San Francisco Neighborhood Antenna Free Union, which works to block installations on sites believed to have populations more susceptible to radiation, including schools and hospitals, said the news of antennas already on school property came



EXAMINER FILE PHO Mobile boost: In 2003, it was reported that The City boasts as many as 2,400 cell phone antennas.

as a surprise.

Loranger said there have been a number of studies that prove people in close proximity to cell phone towers have an increased risk of getting cancer.

"Unfortunately, science can't explain why we're seeing this. We don't know causes yet,' Loranger said.

In 2003, the San Francisco Planning Department reported to the Board of Supervisors that there were 463 station sites in The City with as many as 2,400 cell phone antennas, since many stations had two to four.

akoskey@sfexaminer.com

>>100 Database: Heal**/th** Reference Center Key Words: Elédtromagnetic Radiation Library: San Francisco Public Library Source: Cancer Biotechnology Weekly, Jan 23, 1995 p14(2). 2 martine Title: Study shows EMR linked to cancer. (electromagnetic radiation) Same Carlo Cancer - Risk factors Subjects: Electric utilities workers - Health aspects Electromagnetic fields - Health aspects Electronic Collection: A16418541 A16418541 RN: Full Text COPYRIGHT Charles Henderson, Publisher 1995 Electric utility workers with high exposure to magnetic fields were more than twice as likely to develop brain cancer as those with lower exposure, researchers said. And the risk of a different kind of cancer - leukemia - among electricians more than doubled with long-term exposure to magnetic fields on the job, said the researchers from the University of North Carolina at Chapel Hill (UNC-CH) . But contrary to a study of French and Canadian utility workers, the research found no overall association between leukemia among all utility workers from plant managers to linemen - and exposure to magnetic fields. "It unfortunately leaves the broad question of whether these fields cause cancer unresolved," said Dr. David Savitz, an epidemiologist who worked on the study . The UNC study by Savitz and another epidemiologist, Dr. Dana P. Loomis, was published in the January 15, 1995, issue of the American Journal of Epidemiology The study covered 36 years and about 140,000 men who worked at five large electric utilities: Carolina Power and Light Co., Pacific Gas and Electric Company of Northern California, PECO Energy Company in Pennsylvania, Tennessee Valley Authority and Virginia Electric Power Company.

- 小器容易公 The researchers fit about 2,800 workers chosen randomly with monitors to defermine their on-the-job exposure to magnetic fields. The levels of exposure were then applied to all workers in the study. Brain cancer, which caused 144 deaths among all 140,000 of the workers, was found to be more strongly associated with exposure to magnetic fields than earlier studies suggested, Savitz said. The group with highest exposure to the magnetic fields - including linemen, electricians and power plant operators - showed more than twice as much risk of brain cancer_as the group with the lowest exposure. While the researchers found no overall association between magnetic fields and the second and the risk of leukemia, electricians were found to have 2.5 times as much risk of the blood cancer as those in low-exposure jobs. Pours. Savitz and Loomis also found an increased risk of one specific type of 37 St. leukemia, chronic lymphocytic leukemia, among all the workers in jobs considered to have high exposure to magnetic fields. Dr. Abdelmonem Afifi, an epidemiologist and dean of public health at the University of California at Los Angeles (UCLA), praised the study. "I think it's a well-designed and executed study," said Afifi, who also studies the effects of electromagnetic fields on cancer risks. "It has 30 certainly attempted to be very consistent and attempted to address some of the weaknesses of previous studies." The UNC study differs from a study published last spring that found that French and Canadian utility workers with high exposures to magnetic fields had three times the risk of a another type of leukemia, acute myeloid leukemia, than those with less exposure. The Canadian study also found weaker evidence for a possible elevated risk of a type of brain cancer. Both studies contradict a 1993 project funded by Southern California Edison, a utility company. That study, conducted with UCLA, failed to find any increase in cancer rates among power company workers exposed to strong electromagnetic fields. Afifi said the contradictory findings point to a need for more research. Earlier studies have found that youngsters living around electromagnetic () 1 fields created by power lines have an increased incidence of childhood leukemia: a start Contraction of the second -- End --A. 3.5 品語

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LAWYERS WEEKLY USA

December 13, 1999 Cite this Page: 99 LWUSA 1105

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National Law:

Town Can Reject Cell Phone Towers

Where a town zoning board would not allow a cellular phone tower in a residential area, this didn't violate the Telecommunications Act of 1996, says the Third Circuit in reversing a U.S. District Court.

Over the past 10 years, towns have been trying to regulate where cell phone towers are located. The towers can exceed 250 feet in height and are often placed in residential areas or in the middle of a scenic view. There are expected to be over 100,000 towers in the U.S. within a few years. Although at first courts made it difficult for towns to stop cellular towers from being built, municipalities are now having increasing success.

Experts say that the Third Circuit's decision is the latest in a series of cases to establish the power of local zoning authorities over the placement of towers.

"The pendulum has swung back to the middle. The courts seem to be striking a better balance between municipalities and the needs of the industry," says John Wilson of Rochester, N.Y., who successfully represented a municipality in a recent SecondCircuit case. (Sprint Spectrum, L.P. v. Willoth, 176 F.3d 630; 99 LWUSA 521; Search words for LWUSA Archives: Cross and Yesawich.) "There was a time when the industry would roll over city councils and say, The Act permits us to put up towers at our convenience," agrees municipal lawyer Fritz Knaak of Vadnais Heights, Minn. "This case shows that courts now better understand the arguments and are willing to defer to a municipality's judgment." The decision should give towns more leverage in negotiations with phone companies.

"Municipalities clearly have the upper hand," says attorney L. Steven Emmert, who successfully represented Virginia Beach, Va., in a recent Fourth Circuit case. (AT&T Wireless PCS v. City Council of Virginia Beach, 155 F.3d 423; 98 LWUSA 745; Search words for LWUSA Archives: Gibson and Golembeck.)

"Providers are becoming more conciliatory at the zoning board level because the risks of litigation are less clearly tipped in their favor than they originally thought," agrees Wilson. Attorneys for cellular phone companies complain that the courts are making it too difficult for their clients to get towers approved.

"This case follows the trend of courts raising the bar on what a provider needs to prove in order to get a site developed," says Kenneth Baldwin, who practices in Hartford, Conn. "I don't understand how any provider can really meet the burden imposed by this court."

Residential Area

The town in this case passed an ordinance restricting cell towers to light industrial areas. A cell phone company requested a zoning variance permitting it to erect a 160-foot tower in a residential district. When the board denied the variance, the company sued under the Telecommunications Act, arguing that the denial had "the effect of prohibiting the provision of wireless services." (47 U.S.C. Sect. 332(c)(7)(B)(i)(II).)

But the court disagreed.

"[T]he [Act's] 'effect of prohibiting' clause [does not] encompass every individual zoning denial simply because it has the effect of precluding a specific provider from providing wireless services...To do so would provide wireless service providers with a wildcard that would trump any adverse zoning decision...

"[A] provider whose application has been denied...must show two things. First...that its facility will fill an existing significant gap in the ability of remote users to access the national telephone network... The provider's showing on this issue will...have to include evidence that the area the new facility will serve is not already served by another provider...

"Second, the ...applicant must also show that the manner in which it proposes to fill the significant gap in service is the least intrusive on the values that the denial sought to serve."

In a second case decided a few days later, the court applied the same two-part test, but remanded the case for additional findings as to whether the proposed tower would fill a "significant gap."

High Threshold

Lawyers say requiring companies to show that a proposed tower will fill a "significant gap" in service imposes a difficult new restriction on cell phone towers. "The case establishes an awfully high threshold for providers who claim that a municipality is prohibiting wireless services, because they have to show that there's no access to the national telephone network by any provider" in that area, says Nancy Essex, a municipal attorney who works in Raleigh, N.C.

In effect, the court is saying "that a municipality's authority to deny a provider's application becomes greater when it is beaten to the punch by another provider," says Ted Kreines of Tiburon, Calif., a consultant to local governments on wireless planning and editor of the newsletter PlanWireless. In addition, "the factual inquiry about "least intrusive alternatives' is going to make these cases much less susceptible to summary judgment," says Emmert.

The result, say defense lawyers, will be slower development and increasing costs. "We're going to need more coverage, not less, in the future, and the tougher it is to get towers erected, the slower the system develops," says Baldwin. Companies will be forced to design cell phone towers which are disguised as trees or flagpoles or worked into existing structures, says Stoneham, Mass., attorney Greg Higgins, who represents phone companies. "The downside is these technologies cost two to five times as much as standard development costs - and this translates into higher prices for the consumer."

What Towns Should Do

Experts say there are a number of things municipalities can do to make it more likely that their zoning decisions will be upheld. A front-page article on this issue appears at 97 LWUSA 529; Search words for LWUSA Archives: Dam and Linder.

* Preempt problems.

The best way to handle conflicts over cell towers is to try to avoid them altogether. Towns should bring in consultants before the issue arises, says Knaak. That way, a list of available sites can be compiled in advance and it won't look like the town is intentionally trying to keep towers out.

Working out problems early in the process can benefit companies, too, says Essex. "This case shows that it's in a provider's interests to come to a local government early and get a whole network approved, because when the provider needs one last tower to complete a pattern and fill a gap, the fact that there's only one available site isn't going to be enough to justify a "tower."

* Don't forget the details.

Although courts are becoming more likely to reaffirm local zoning authority, municipalities still need to be meticulous about observing procedural proprieties, says Essex. "A lot of the challenges to municipalities have been on a procedural basis. Make sure that an order rejecting an application contains the grounds for the decision, and that decisions are made within a reasonable time," she cautions.

Also, it's vital for towns to buttress their case with supporting documentation and testimony. "The most important factor when you're in court is to have a full record developed below," says municipal attorney Kirk Wines of Seattle. "If you build a careful record at the hearing level, the court is more likely to back you up."

* Hire experts.

Another step that more and more municipalities are taking is to counter companies' use of expert testimony with their own. "Be sure to retain your own experts," says Philip Lope of Zelienople, Pa., who represented the town in the Third Circuit case.

Municipalities should consider getting an expert to testify on such issues as "the quality of service, the nature of the gap in service, other feasible, less intrusive alternatives to the proposed tower, and whether other providers are able to supply service without requiring a zoning variance," suggests John Pestle, a municipal attorney from Grand Rapids, Mich.

Other useful experts might include a radio frequency engineer who can challenge the company's technological assertions and an appraiser to testify about effects of the proposed tower on property values, says Wines.

* Ask for alternatives.

Cities and towns should take advantage of the burden placed on companies by challenging them to show that no less intrusive alternatives are available, says Wilson. In this case, "the court said that there are alternatives to every cell site - no court has ever come right out and said that before. They've danced around it, alluded to it, but here the court says, 'Don't just bring us one option," says Kreines. But towns shouldn't get overconfident without having the facts to back up the assertion that less intrusive alternatives are available, warms Emmert

"If localities abuse their position, the courts are going to stop giving them deference and say, if you really think there is a less intrusive alternative, prove it," he says.

U.S. Court of Appeals, 3d Circuit. APT Pittsburgh L.P. v. Penn Township, No. 98-3519. November 8, 1999. Lawyers Weekly USA No. 9917124 (20 pages).

U.S. Court of Appeals, 3d Circuit. Cellular Telephone Co. v. Zoning Board of Adjustment of the Borough of Ho-Ho-Kus, No. 98-6484. November 19, 1999. Lawyers Weekly USA No. 9917132. (11 pages).

To order a copy of either opinion, call 800-933-5594.

Introduction



Jefferson Lab EH&S Manual - Rev. 3.0 - 25 MARCH 1997 --- 6420 Radio Frequency and Microwave Radiation (May 9, 1995)

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Introduction

This chapter describes the potential hazards of radio frequency (RF) energy, the controls used at Jefferson Lab to prevent accidental exposure to harmful RF, and the practices that are used to protect all employees and site visitors.



Electromagnetic energy can propagate through air and vacuum. It does not necessarily need wires or other conductors to move away from its source. Visible and invisible light and radio waves are examples. Radio waves include the frequencies used in microwaves--which may be used for special communications, radar imaging, and heat generation--as well as those used in conventional radio

Jefferson Lab uses RF energy for a number of important applications, including powering the accelerator itself. RF can be hazardous. The degree of danger is related to the source power level, the distance and shielding between you and the source, and the frequency or wavelength of the radio waves.

High-power sources such as amplifiers, high frequency electrical transformers, and inductive heaters can also generate RF energy.

Radio-frequency (RF) energy can produce heat in body tissue faster than it can be safely dissipated. Skin burns, internal burns, and organ--especially eye and gonad--damage are all potential hazards. Internal effects from RF exposure, especially low-level exposure, may not be immediately noticeable. Some research has suggested that RF may cause other, longer-term health effects.

Waveguides and coaxial cable may carry the RF energy from the source to other locations. At Jefferson Lab, waveguides carry RF energy from the service buildings to the cryomodules in the tunnel. Also, lower power RF sources are used at several locations on site.

application renewal. Applications for renewal shall be submitted to the Community Development Agency no later than thirty (30) days prior to expiration of the initial one-year permit approval. The initial one-year approval period may be extended by the County if applications for renewal have been properly filed and are pending. The initial one-year approval period may also be extended for up to nine additional years if the Community Development Director determines that the project is in complete compliance with the Marin County Telecommunications Facilities Policy Plan, as amended, including but not limited to the final standards and criteria, and other pertinent County land use regulations such as the Marin Countywide Plan, applicable Community Plan or other specific plan, and Zoning Code (Title 22), and that new or modified conditions of permit approval are not required. In addition, a permit application may not be renewed if the facility is not upgraded to minimize its impacts, including land use compatibility, visual resources, public safety or other factors addressed by CEQA, to the greatest extent permitted by technology which exists at the time of renewal and is consistent with the provisions of adequate service at affordable rates.

Location of Wireless Communications Facilities - General Standards

- IV. All personal wireless facilities shall be sited to avoid or minimize land use conflicts by meeting the following standards.
 - A. No wireless communications facility shall be sited in a location where it will unreasonably interfere with the operation of the Marin County Airport (Gnoss Field).
 - B. Location preference for wireless communications facilities should be given to publicly used structures, co-location and shared-location sites, and industrial or commercial sites. Agricultural and open space areas may be preferred sites when the site design of the proposed facility can avoid or minimize adverse effects related to land use compatibility, visual resources, public safety, and other environmental factors addressed by CEQA. Applications for new wireless communications facilities should avoid sites located within or near residential areas, hospitals, child day care centers, or schools unless the applications include information sufficient to demonstrate the location and type of preferred sites which exist within the proposed or technically feasible coverage area: that good faith efforts and measures were taken by the carrier to secure the preferred location sites specific reasons why such efforts and measures were unsuccessful; and specific reasons why the location of the proposed facility site is essential to meet the service demands of the carrier. The information required by this standard may be incorporated into the information required by Section V(A) below.
 - C. Wireless communications facilities shall be attached or sited adjacent to existing structures unless the carrier demonstrates to the satisfaction of the County that no other technically feasible site exists or that construction of a freestanding facility on or at a distant location from an existing structure will minimize adverse effects related to land use compatibility, visual resources, public safety, and other environmental factors addressed by CEQA. Appropriate types of existing structures may include, but not be limited to: buildings, water tanks, telephone and utility poles, signage and sign standards, traffic signals, light standards, and roadway overpasses.
 - D. Monopoles for wireless communications facilities should not be located in residential, agricultural, or designated open space and conservation areas unless technical evidence demonstrates to the satisfaction of the County that no other alternative facility site or type of antenna support structure is feasible and/or if the use of a monopole for the proposed facility by itself or in combination with other existing, approved, and proposed facilities will avoid or minimizes adverse effects related to land use compatibility, visual resources, and public safety.

Co-location and Shared-location of Wireless Communications Facilities

V. "Co-location" means a telecommunications facility comprised of a single structure used to support multiple antenna operated by different carriers. "Shared-location" means more than one telecommunications facility

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Cellular Assault

Microwaving Our Planet

by Arthur Firstenberg

In February of last year, only five senators and 16 representatives voted "no" on the Telecommunications Act of 1996. We have, consequently, hundreds of new satellites competing for space in our crowded skies, hundreds of thousands of new communication towers sprouting up in our midst and the uncontrolled proliferation of wireless broadcasts. This amounts to an electromagnetic war on life from which there soon will be no place to hide.

While the visual impact of telecommunications technology has come under fire, environmental circles have paid surprisingly little attention to its biological impact — one of the most dramatic and rapid alterations of the Earth's electromagnetic environment ever to occur. Yet, there has been a deliberate absence of debate on microwaves and radiation.

Meanwhile, virtually the entire microwave spectrum, from 300 megahertz (MHz) to 100 gigahertz (GHz), has been or will soon be on the auction block. (Cellular phones operate within this range at 860-900 MHz; personal communications service phones operate at 1,800-2,000 MHz.) Telecommunications companies are spending billions of dollars leasing chunks of spectrum from the Federal Communications Commission (FCC) for use in dozens of new types of cellular, paging, radio, television and other global networks that will link computers and people without the inconvenience of costly hard-to-maintain copper wires.

Personal communications services (PCS), the largest of these networks, are spreading over the Earth's surface with incredible speed. Introduced on a wide scale only last November, PCS already provides wireless voice, fax and data transmission capabilities to subscribers in hundreds of US cities.

Sprint PCS is building 50,000 new broadcast towers this year; Omnipoint Communications has erected thousands of antennas in New York City and plans to spread nationwide; and Primeco Personal Communications is following suit, along with Pacific Beil, Bell South and Western Wireless.

Altogether, 1,500 companies have obtained PCS licenses from the FCC. The in-

Arthur Firstenberg, a holistic health practitioner, is the author of Microwaving Our Planet: The Environmental Impact of the Wireless Revolution (1996) and president of the Cellular Phone Taskforce, PO Box 100404, Brooklyn, NY 11210, (718) 434-4499. dustry is mounting antennas on apartment buildings, water towers, churches, schools, billboards, highway signs, lamp posts and traffic lights — while telling us that all this is safe. But the energy emitted by PCS antennas is extremely close in frequency (1.8-2.0 GHz) and power (up to 1,000 watts or more) to the energy that cooks food in microwave ovens. Essentially, hundreds of thousands of microwave ovens are being placed on rooftops and towers — and they're being turned on with their doors open.

Seventy Years of Suppressed Studies

The electromagnetic bombardment from telecommunications systems is so great that it also has become necessary for companies to spend huge sums of money to develop better shielding for pacemakers, hearing aids, computers, guidance systems in airplanes and helicopters, and most other electronic equipment.

Despite well-documented exposés such as Paul Brodeur's *The Zapping of America* (WW Norton, 1977) and Robert Becker's *Cross Currents* (Jeremy P. Tarcher, 1990), the industry continues to deny that this same radiation has any effect on human beings, plants or animals.

We are being asked to believe that there are no nonthermal effects and that if microwaves aren't strong enough to cook us, they will do us no harm.

Much as the asbestos and tobacco industries have done, the telecommunications industry has suppressed damaging evidence about its technology since at least



1927, when colloid chemist Ernst Muth first discovered that red blood cells exposed t radio frequency waves (at levels far les powerful than permitted today by the FCC are forced to line up in chains resemblin strings of pearls.

In the 1950s, the Soviet Union and Eas: ern Europe began to set nucrowave expesure standards that were up to 1,000 time more stringent than those in the West. U scientists entrusted with the safety of rada systems, microwave relay towers and radio and television networks had no diff culty convincing the American public that Eastern bloc scientists didn't know how t do proper research. Never mind that som of the most careful and meticulous work i the field was being done in the US — wit identical results.

Biologist Allan Frey, for example, we publishing data that showed damage the heart, nervous system, eyes and othe organs even by levels of microwaves pe missible in the Eastern bloc. Some of h work was done under contract with the L Air Force and Navy.

Frey also demonstrated that people cr hear low-level pulsed signals as buzze clicks or tones in their heads. Other scie tists confirmed that even extremely low energy microwave signals heat enoug brain tissue to set up pressure waves i

Telephone Antennas in Our Parks?

Last year, President Clinton gushed that the Telecommunications Act of 1996 would "bring the future to our doorstep," but a little-noticed section of the act could bring broadcast towers and satellite dishes to the top of Mount Rushmore and Yosemite's Half Dome.

As Washington Post reporter Tom Kenworthy discovered, the Telecommunications Act will make i "considerably easier for the communications industry to erect antennas and other unsightly gear withir national parks, wildlife refuges and other protected federal property." Corporate telecommunications giants love the act, Kenworthy reports, because "so many mountaintops and high-elevation areas" are found on public lands.

The act orders that "requests for the use of property, rights-of-way and easements... be granted absen unavoidable direct conflict with the department or agency's mission."

The big question is: Who determines whether there is an "unavoidable, direct conflict" — park officials the Federal Communications Commission or the corporations?

"The telecommunications industry is one of the fastest-growing industries in the country," an anony mous Interior Department official told the Post. "You're talking about taking on 2 to 3 percent of the GNP... They've been trying to get into parks and refuges for some time."

Park officials have been besieged with requests to place towering infernals on the Channel Island National Park off California so broadcasters can beam signals to customers in the Los Angeles area. - G.

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side the head — similar to those occurring in a concussion. When the pressure waves reach the inner ear, they produce a sound.

After three decades of research, Frey complained that very little of this kind of information was reaching the public. In 1983, he wrote that US citizens "have to fight for every piece they want and then cannot trust what little they get."

Who's Setting the Standards?

Frey warned of "a small group of scientists controlling the setting of health hazard standards, controlling what research bearing on that standard gets funded or published, while providing testimony for various companies and government agencies to the effect that substantial microwave energy exposure is safe."

This "small group of scientists" was made

Dropping the 'E' Bomb

The Toronto Globe and Mail reports that cellphones repeatedly disrupt telemetry systems monitoring patients' heartbeats at St. Paul's Hospital In Vancouver, British Columbia. Even when not in use, cellphones interfere with ventilators, infusion pumps for delivering intravenous fluids, anesthetic delivery systems, dialysis machines and brain wave monitors. Canada estimates that it will take 15 years to equip hospitals with proper radiation shielding.

In the United Kingdom, Volkswagen warns new car buyers not to use cellphones inside automobiles, where a "resonance" effect can increase signals tenfold. The wavelength of a 900 MHz mobile phone held next to the ear is 4 centimeters — enough to penetrate the brain.

Britain's Sunday Telegraph, meanwhile, warns that mobile phones can interfere with electronic braking and steering. On October 30, 1995, the London Independent reported that a Jaguar "traveling at a high speed on the motorway suddenly stopped when the driver's phone activated the brakes."

In Brussels, Camellia Gabrielle, a microwave expert with Cenelee, which sets standards for the European Community, warns against heavy use of mobile phones. Noting research by Britain's National Radiological Protection Board showing that as much as 70 percent of a mobile phone's radiation is absorbed by the head (where it can create "hot spots"), Gabriel recommended limiting emissions to 20 milliwatts (most mobile phones emit 100-600 milliwatts).

In the US, University of Washington researchers Henry Lai and Narenda Singh found that microwave radiation comparable to mobile phone emissions spilt DNA molecules in rats' brains. These breaks, they note, are linked to Alzheimer's, Parkinson's disease and cancer.

Cellular Assault

up of engineers and veterinarians, not doctors, biologists or epidemiologists. The American National Standards Institute (ANSI) — the agency that was (and still is) setting microwave exposure standards is not a government agency but a private organization funded and controlled by industry.

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Though Congress authorized the FCC to set safety standards for radio frequency and microwave broadcasts, the FCC has seen fit to make a voluntary industry standard the law of the land. In February 1996, Congress made ANSI's standard not a minimum but a maximum safety standard.

The 1996 Telecommunications Act declares: "No state or local government or instrumentality thereof may regulate the placement, construction and modification of personal wireless service facilities on the basis of the environmental effects of radio frequency emissions to the extent that such facilities comply with the Commission's regulations concerning such emissions."

In addition, the 1996 federal budget cut all EPA funding for studying the health effects of radio frequency and microwave transmissions. It wasn't restored in 1997.

This means that if novel telecommunications technologies fall within the FCC's safety guidelines but nevertheless prove hazardous, injured citizens will have no recourse, and a threatened environment will receive no protection.

Microwave Radiation Sickness

The most extensive and well-controlled epidemiological studies on the biological effects of radio broadcasts have been underway since 1989 near a radar station in Skrunda, Latvia. Results show impaired motor function, reaction time, memory and attention among schoolchildren; chromosome damage in cows; abnormal growth, shortened tire span and impaired reproduction in duckweed plants; decreased thickness of growth rings in pine trees; and premature aging of pine needles and cones. The levels of radio waves involved are not much higher than what we receive on Earth from the newest telecom satellites.

Data published by radio frequency/microwave consultant Kathy Hawk in her 1996 book *Case Study in the Heartland* document the disappearance of birds and honey bees, an increase in farm animal birth defects and the sudden deterioration in the health of farm families living near newly erected cellular lowers in the Midwest.

Perhaps the most ominous news comes from a survey by the Cellular Phone Taskforce, an organization comprised of citizens injured by radio transmissions. The task force runs a clearinghouse on health problems it believes are caused by PCS broadcast antennas.

Reports from cities throughout the world indicate a new kind of illness that coincides in every case with the activation of a PCS network. The symptoms are striking: pressure behind the eyes; dry, puffy lips; swollen thyroid; sudden rise in pulse rate and blood pressure; pressure or pain in the chest; insomnia; dizziness; headache; nausea; loss of appetite; coughing or wheezing; sinus problems; testicular or pelvic pain; muscle spasms; tremors; irritability; memory loss; pain in the legs or the soles of the feet; pains that move around the body; varying degrees of dehydration; and occasionally fever, rash or nosebleeds.

The illness appears to be confined to geographical areas served by new PCS and other digital systems. Remarkably, a growing number of environmental refugees have recovered immediately upon leaving the PCS coverage area.

Time to Pull the Plug

The net is closing. All of the older communication technologies that broadcast analog signals at relatively low frequencies are being phased out and replaced by higherfrequency digital signals that 70 years of research indicate are hazardous to life.

Microwave radiation levels in major metropolitan areas have increased 1,000-fold overnight. And telecommunications companies are well on their way to covering every square inch of the Earth with digital wireless broadcasts from Earth- and spacebased antennas — faster, they are betting, than it will be possible for anyone to mount an effective opposition.

The stakes are too high to sit still. The Telecommunications Act must be amended to require epidemiological studies on the effects of all this radiation on the public and to restore the prerogatives of local and state governments concerned about their citizens' health. Money for scientific research must be restored to the EPA. There should be full congressional hearings on the environmental implications of the wireless revolution and on the telecommunications industry's wholesale suppression of scientific evidence.

In the absence of congressional action, local communities need to challenge the constitutionality of a law that prevents them from protecting their citizens and the environment. Otherwise, 1998 could be a silent spring — not because of pesticides, nukes, ozone depletion or global warming — but because of the electromagnetic fallout from the information explosion that so many in the environmental movement had counted on as our salvation. Essential Guide to TV Fat-Fighting Hormone Honda's Green Civic The Flying Wir PopularScience BASS World



The information skyway is coming

soon to a wireless device near you.



THEY SAY YOU NEVER FORGET your first wireless gadget. Well, OK, maybe they don't say that. Nonetheless, I remember mine ell: a cheap transistor radio from Radio Shack that cost me a week's pay peddling the local newspaper. But it's not the radio itself I recall so fondly. It's the freedom that sawbuck bought me. From then on, the Rolling Stones toured with me. It was magic.

BY CHRISO'MALLEY

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The Little Pager that Grew Up

PERHAPS NOWHERE IS the potential of wireless communications more aptly illustrated than with the pager. Once simply a "beeper" worn by doctors, the lowly device has grown into a kind of message center for the 1990s. So-called alphanumeric pagers with small LCD screens can show not only a phone number, but a complete message as wellwhether dictated to an operator or sent by a computer's modem. And many paging companies now offer the convenience of receiving e-mail messages on your pager. E-mail generally can be automatically forwarded from an online account or sent to you directly via an operator or a computer system using special software sold by paging companies.

Your pager can also let you know that you've received a fax or a voice mail message. SkyTel's SkyFax service, for example, beeps you when a fax is received through a special toll-free number. You can then call the SkyTel system to direct the fax to your office or hotel. PageNet offers a similar service called FaxNow. Voice mail options work in much the same manner. Pacific Bell's Message Center, for example, will page you whenever a new message is received in your voice mailbox.

But the best is yet to come, as paging finally becomes a two-way street. By the end of this year, with a bidirectional pager, you'll be able to acknowledge messages by choosing one of the 120 canned responses included in the unit's software. The first bidirectional pager to appear will likely be Motorola's Tango, a 5.6-ounce unit containing a flip-up panel that acts as an antenna for transmitting and receiving.

The Tango pager is expected to work first on a new two-way paging network developed by SkyTel, a division of Mtel. Mtel got an early start in the emerging "personal communications services" arena by being awarded a "Pioneer's Preference" license from the FCC in 1992. Most of the other big names in nationwide paging, including Mobile-Comm and PageNet, purchased similar two-way licenses in the subsequent FCC auctions.—Jeff Hecox

It still is. At the moment, the magic is emanating from a modem the size of a credit card, tucked snugly inside my laptop computer, which sits on a shaded picnic table facing the Atlantic Ocean. A short, thin cable connects the modem to my cellular phone, itself a folding monument to miniaturization. The modem dials the cellphone, and within a matter of minutes I'm wirelessly transported to the Internet and the home page of who else but the Rolling Stones. Magic. Freedom.

That is, until the pager beeps, flashing an urgent electronic message across its matchbook-size screen: "Need diapers now."

Welcome to the wireless world. It's a world in which nearly anything we

previously did with wires can be done without them. A world in which new ideas-many of them unthinkable with wires-seem as boundless as the air they travel through. And a world that audaciously promises not just a series of technological marvels, but a kind of lifestyle liberation. Unplugged, we have more choices about where we work, play, and live. Untethered, we can travel far and stay close at hand. Unhitched, we can blithely bypass the cable TV and phone company networks and tap into new streams of information and entertainment.

To an extent, it's a world we already know: More than half of all U.S. households own a cordless phone, for example, and 25 million people roam completely free, yakking on cellular phones. Yet in the long view, it's a world we can hardly conceive of: Our children may one day call their kids to supper with displayequipped kitchen appliances that use satellite signals to pinpoint their playground locations and place videophone calls to their wristbands.

In the interim, the rapidly evolving wireless world is poised to change our lives in less dramatic but significant ways, even over the latter half of this decade. While we await the paving of the information highway, consider how the wireless skyway is coming to your home, car, computer, and suit pocket:

• The airwaves are ringing. Long used primarily to make calls where a wired telephone wasn't convenient, cellular phones are now being recast as full-time, full-function phones. Basic services such as call forwarding and voice mail, coupled with the option of having one phone number wherever you go, are making it more practical to receive calls on your cellphone. Next up: cellular phones that automatically become cordless phones (transmitting to a wired base station) as you pull into your house's driveway.

• Pagers are talking back. Whether they're simple beepers or short-message display models, pagers have always shared a basic limitation: They receive, but they can't send. Now new paging networks being tested will let you answer from the hip. The first of these two-way pagers, including Motorola's Tango, will allow you to send acknowledgments, like "yes," "no," or "got it." The next wave will let you reply in longer verse.

• Data is flying. New error-cushioning cellular modems, such as the Toshiba Noteworthy model I hooked to my Motorola flip phone, enable you to send and receive computer data at reasonably high speeds over the turbulent airwaves of today's cellular network. A new digital network known as CDPD (cellular digital packet data) is being rolled out across the country this year and next. Meanwhile, the alternative radio-frequency data modems and networks are getting faster, smaller, and cheaper. Motorola's new Personal Messenger 100D fits on a PC Card, for example, and wireless e-mail service via the RadioMail service costs \$39 a month. • Wireless is working. Many people who formerly worked with clipboards are now getting their jobs done with electronic pads or tablets that can wirelessly send and receive information to and from other people and computers. And it's not just UPS drivers and supermarket stock clerks. At hospitals run by the Veterans Administration, doctors and nurses will soon record, process, and communicate patient information using electronic tablets from Telxon.

• Daytimers are going digital. The promise of "personal digital assistants" may finally be realized as new pocket computers add a missing ingredient to the mix: convenient wireless communications. New personal communication services (PCS) networks, such as Mtel's Nationwide Wireless Network debuting next year, put most of the sending and receiving power for e-mail and faxes in the network, so PDAs with wireless features can be smaller and lighter. And they'll be able to last weeks, not hours, on batteries.

• London is calling. And so, too, will Tokyo, Berlin, Moscow, and the rest of the world when new satellite phone networks begin providing round-the-globe service later on this decade. Today's cellular phones are generally useless outside their native soil-or once you're a few miles at sea or aloft in a plane. But with a phone that communicates with satellites ringing the planet, rather than with land-based antennas, you'll be able to call literally from anywhere to anywhere. Motorola's Iridium prolect, backed by international phone companies, will likely be the first such service. But other parties are interested. Among them are Microsoft's Bill Gates and McCaw Cellular's Craig McCaw, who've

formed a satellite phone company called Teledesic to do the same. • Dishes are shrinking. Satellite TV dishes are becoming smaller and more affordable. Led by Thomson's pizza-size RCA Digital Satellite System-and competitors like Sonytelevision may be going back to its wireless roots. In the process, the dishes are offering more channels (many of them dedicated to movies and sports) than cable TV, and superior video and audio quality. Eventually, they may offer data services for interactive TV and PC connections. More down-to-earth microwave TV systems are beginning to offer alternatives to cable, too.

• Cars are riding on air. The radio broadcasting data system (RBDS) is expected to routinely—and wirelessly, of course—send news headlines, traffic reports, weather advisories, and information about the music being played to millions of display car radios within the next few years. Radio-based "intelligent" highways and car navigation equipment guided by Global Positioning System (GPS) satellites will be able to show you alternate routes when the going gets slow.

• The gadgets are coming! Cordless phones and TV remotes were just



the beginning. Among the multitude of new wireless items that could catch on are personal GPS compasses, pager pens and watches, cordless infrared printers, and pocket communicators for kids—the latter already the rage among girls in Japan.

Lest we forget amidst the airborne commotion, the trend to wireless is truly a worldwide phenomenon. Millions in China are using pagers to communicate in places where no wired telephone network exists. Millions more in African countries are sidestepping their backward infrastructures with cellular phones. Satellite TV service is a staple of daily life in many European nations.

What all of these wireless technologies have in common—and the fount of their tremendous potential is the part we can't see: the transfer of information over thin air. Magic is not a bad word for it. It's the combined sorcery of electrical and magnetic forces, or electromagnetic waves, regenerating each other at incredibly high speeds (roughly 300 million meters per second, or about three quarters of the way to the moon with every tick of your watch).

Scientifically, it all gets started pretty simply. Change the motion of an electric charge-push it, wiggle it, vibrate it-and you've produced an invisible but measurable and controllable wave of energy that can be used to carry a human voice, a computer file, or a left-turn command for a radio-controlled car. The key is how often the charge gets manipulated. That determines the number of wave cycles per second, or the frequency, and in turn the distance between the waves, or the wavelength. Imagine a long, taut rope being moved up and down briskly at one end, and you've got a good picture of how these waves behave.

Electromagnetic waves go through us, bounce off us, and zip past us all the time, usually without harm or even notice. Visible light occupies only a tiny sliver of the electromagnetic spectrum, wedged between infrared and ultraviolet frequencies.

The Radio Spectrum

Most of the wireless devices we use operate within a portion of the electromagnetic spectrum known as the radio spectrum, a range of wavelength frequencies between 3,000 cycles per second (three kilohertz, or 3kHz) and 300,000,000,000 cycles per second (300 gigahertz, or 300GHz). Below the radio spectrum are very low frequencies, such as those emitted by power and telephone lines. Above the radio spectrum are the frequencies representing infrared, visible, and ultraviolet light, as well as X-ray, gamma-ray, and cosmic-ray frequencies. Here are where some of the more common wireless devices fit into the radio spectrum:





11°





AM Analog radio cordless phones	TV channels 2-6 (VHF)	FM TV radio channels 7-13 (VHF)	TV channels 14-69 (UHF)	RF wireless modems	Cellular phones	Digital cordless phones
535-1635 44-49	54-88 88-10	MHz	470-806	800	806-890	900
kHz MHz	MHz MHz		MHz	MHz	MHz	MHz

(Not coincidentally, our eyes are visually tuned into the wavelengths most efficiently radiated by the sun.) And it's only at levels above visible light, including UV rays, N rays, and gamma rays, that electromagnetic waves are known to be harmful (though some people contend they've been damaged with lower frequencies, by using a cellular phone or liv-

ing near electrical power lines or microwave transmitters.).

The waves generated by today's electronic gear are typically produced and interpreted by semiconductors, or chips, using the broad areas of the spectrum known as radio waves and microwaves. Radios. TV's, and older communication and navigation systems have used these waves for years, first with electronic vacuum tubes and then microchips.

There is, however, a limited amount of "space" within the radio and microwave range, and wireless devices must operate on different frequencies in order to work without interfering with each other. So new wireless gadgets and services must compete for increasingly narrow



And the keen interest in new wireless technologies has led to a kind of modern-day gold rush for more portions of the radio spectrum.

In the United States, it's the Federal Communications Commission that classifies and hands out licenses to use parts of the radio spectrum. Or at least the FCC used to hand them out. Currently, the FCC is auctioning off some of the spectrum to the highest bidders, at billion-dollar prices that can make downtown apartments in Tokyo seem like bargain basements. Indeed, it's a telling commentary on what lies ahead when the most precious "real estate" on the planet isn't even on terra firma.

But while we can't grow more of

this ethereal spectrum, we can use what we've got more efficiently—and, in effect, clear new avenues for wireless communication and widen others. One way is to free up, or "reallocate" in FCC parlance, portions of the radio spectrum assigned to the U.S. government or older communication systems such as those for commercial fleets and railroads. Another, more promis-

A Home with Frequency Overload Doesn't Seem so Sweet

THINK OF ALL the devices in your home that rely on wireless links cordless phones, baby monitors, radios, and wireless speakers, for starters. As the number of devices that rely on wireless transmissions increases, however, so does the potential for interference.

Interference occurs when a signal traveling at a specific frequency meets up with another traveling at that same frequency. Each signal has an amplitude (strength) and phase (its point on an s-shaped sine curve), and when these two both meet, they combine to form a new signal; in the extreme, they can cancel each other out. Usually you simply receive a degraded signal, often experienced as irritating static.

The FCC assigns frequencies to specific devices and determines the distance over which they can broadcast data. For instance, the transistors inside television sets operate at a frequency of about 44MHz. They will affect other devices operating at 44MHz only if they're within a few feet of the TV, however. Radio stations, on the other hand, which also broadcast over specific frequencies, can cover an area of many miles.

Adding an additional wireless device to your home isn't as easy as finding a free outlet. You need to consider the disruptive effect it might have. A couple of things to consider: Baby monitors, many cordless phones, and the transistors inside your TV all operate within the same frequency bands. Most phones can operate at several frequencies, so your interference problems are usually solved easily by manually or automatically seeking a free channel. If that doesn't work and you have one of the new 25-channel phones, try moving the phone's base station farther from the TV.

The other class of devices, including wireless speakers, digital cordless phones, remote control extenders, and microphones for use with camcorders, operates in the low 900MHz range. According to the FCC, speakers and telephones do not share the same precise frequencies, so you should be able to tune your speakers to an available frequency. Also, since 900MHz phones operate over a broader range of frequencies, they should automatically be able to seek out a free channel.

In an unscientific experiment, POPULAR SCIENCE set out to see how many 900MHz devices could be operated in a New York City apartment at once without significant interference. Unfortunately, we stopped at one. After tuning 900MHz wireless speakers from Recoton to all available frequencies, we were unable to get a Cobra 900MHz digital spread-spectrum phone to produce even a weak dial tone. Only when all wireless speaker components had been powered down would the phone work.

The phone company says it's a problem with the speakers. The speaker company says it's a problem with the phone. The FCC says it's not supposed to happen. The moral of this tale: Look before you leap into the wireless world. And save your receipts. —Suzanne Kantra Kirschner

ing way is to have the airwaves carry digital rather than analog signals.

Why go digital in the air? Mainly, because any collection of digital signals—whether it's a computer file or a voice call that's been converted from analog sound waves into bits—can be compressed into a small fraction of its original size before being sent over a radio frequency. The difference can be dramatic. In many cases, digital compression techniques make it possible to send only one bit of data for every 25 to 100 in the original digital form. That effectively increases the capacity of the radio channel by a factor of 25 to 100 times.

It's already happening with cellular phones. Cellular service providers across the country are rushing to upgrade their network equipment to handle digital calls, and in many cases subsidizing the cost of digitalready cellphones (hence, the many one-cent and one-dollar phones out there). While all of this is costing the companies money now, it will alleviate the capacity problems that keep some calls from going through at peak-demand periods. And it will give the companies room to grow, and presumably room to cut prices as more people buy cellular phones and service.

Surfing the airwaves is not without its own perils, however. Floating phone calls through the air, for example, has proven too tempting for many thieves and pirates. Cellular carriers say the illegal use of their networks costs them about \$500 million per year. And it can cost you some privacy, too. Eavesdropping on cellular phone calls is still alarmingly easy for anyone with the inclination and the proper radio scanner. Data may prove just as vulnerable, though digital encryption techniques are expected to make wireless transmissions more secure.

Right now, pushing data through the air also limits the speed at which information can be moved. While the best wireless modems are now consistently attaining respectable speeds (9,600 bits per second and up), for example, they're certainly no match for moving computer data over wired local area and global networks. Data deliveries by satellite might be, though.

These and other clouds will make the ride bumpy at times, but they won't likely change our course. We're flying warp speed into the wireless world of ubiquitous communications. Tuesday, March 5, 1996

New PCS phones beat cellular system in quality, cost

By WALTER S. MOSSBERG ing infectiouslian

Normally, this space is occupied by a discussion of personal computing, because the computer is both the most important and the most confusing form of personal technology. But there are other interesting new technologies meant for individual use, so every

now and then, it makes sense to focus on one of them

Lately, I've been try ing out the first of a new breed of wireless. phones, a technology culled PCS, or personal communications system, designed to com-

Technology

pete with cellular phones. These new phones aren't compatible with current cellular phone networks, but companies have been lining up to pay the Federal Communications Commission billions of dollars for the right to build and operate PCS networks in cities around the country.

The technology is so new that there's only one region so far where you can buy and use PCS phones, the Washington/Baltimule area. There, a PCS service called

Sprint Spectrum was launched in November by a company called American Personal Communications, which is partly owned by Sprint.

After using a PCS phone in and around Washington for a couple of months, my verdict is that it's superior in nearly every respect to a cellular phone, with better call quality and greater security.

The new phones also include a host of built-in features even with the cheapest rate plan, such as numeric paging right on the phone's screen, free voice-mail service, free caller ID and no charge for the first minute of any incoming call. Not only that, but they're less expensive for many, if not most, types of users. There's no activation fee, no service contract of any kind, no penalty for dropping the service.

Only one city

In fact, there's only one significant drawback to a PCS phone: Because there is only one city so far with PCS service, you can't use a Sprint Spectrum phone if you travel. But the vast majority of current cellular-phone users don't take their phones out of town, and in any case, other big cities are due to get PCS phone service over the next three years, extending the reach of the phones.

Both the PCS phone itself, and the basic structure of the network, seem similar to the cellular system at first glance. Like cellular phones, PCS phones operate by transmitting and receiving wireless signals within a grid of small base stations around town that are tucked out of sight. The phone I've been using, a \$199 model from Nokia, is indistinguishable on the outside from common Nokia cellular models.

But there are key differences below the surface. Unlike most of the U.S. cellular system, the PCS system handles phone calls as a stream of digital bytes, just like a computer handles data. I found these digital calls to be clearer, with much less static and fading, even in a car or inside most buildings. Dropped connections were also rare, as were failed attempts at dialing.

My only complaint with the Nokia phone I used was that sometimes the microphone picked up too much background noise. And the phone is just as cryptic and difficult to program as your typical cellular phone.

Calls in this digital format can't be overheard with the kind of simple scanners now used to eavesdrop on cellular calls. Eavesdropping is technically possible, but it requires special gear and technical skill, which most eavesdroppers

lack. Similarly, the phone number and other data which a PCS phone broadcasts about itself are encrypted, so crooks can't just pluck this information off the airwaves and steal it, as they do with common cellular phones.

Unlike cellular phones, PCS phones are sold like any other electronic device: You buy them at the store and activate them yourself, by dialing a built-in phone number. That's easy and cheap, but it means nobody is throwing in phones at low prices to induce you to sign a contract. There are only three PCS phone models - Nokia, Ericsson and Motorola - available in Washington. These models are small and advanced, and cost from \$150 to \$200.

Aggressively priced

At least in Washington, the PCS service itself is priced very aggressively. Even the cheapest Sprint Spectrum rate, at \$15 a month, includes all the built-in PCS features, plus 15 minutes of free airtime usable day or night. Extra airtime costs 31 cents a minute.

By contrast, Bell Atlantic Nynex Mobile. Washington's leading cellular carner, offers far less for \$15 a month. Its plan doesn't include any free airtime, paging,

voice mail, caller ID or free incoming min utes. The cellular plan requires a \$29 activation fee and a two-year contract with a \$175 termination penalty All outgoing calls can cust at least 35 cents 4 minute. and up to 99 cents a minute, depending on where you are in the metro area

Telephone price companisons are com plex, and depend on how people use the services. My sense, however, is that even with more common plans costing \$40 of \$60 a month, the PCS phones in Washing ton are a better deal than cellular, when you consider all the features.

The feature and security gap between PCS and cellular service will surely narrow, as standard cellular companies plan to convert more of their networks to han dle digital data and to offer things such as built-in paging. What's more PCS could be limited by incompatibilities between cities, because there are three different. PCS technologies that companies plan to use.

But for now, most cellular customers who don't travel much would do well to take a serious look at PCS phones when they hit your town

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