

Nos. 11-17707, 11-17773

**United States Court of Appeals  
for the Ninth Circuit**

---

CTIA-The Wireless Association®  
Plaintiff-Appellant/Cross-Appellee

v.

The City and County of San Francisco, California  
Defendant-Appellee/Cross-Appellant

---

Appeal from United States District Court for the Northern District of California  
Civil Case No. 3:10-cv-03224 WHA (Honorable William H. Alsup)

---

**Brief of Amicus Curiae, Consumers for Safe Cell Phones, Inc.**

Preliminary Injunction Appeal

---

Consumers for Safe Cell Phones, Inc.  
520 Ridgeway Drive  
Bellingham WA 98225  
by Cynthia Franklin, President, telephone 360-201-3959

## **Table of Contents**

Introduction.....	3
FCC Regulatory Background.....	3
The Industry’s Myth of the 50-fold Safety Factor.....	5
FCC’s SAR Testing Model Larger than 90% of the Population.....	9
FCC and FDA Regulatory Authority with Respect to Health and Safety .....	10
Corporate Disclosure Statement.....	12
Statement of Authorship and Financial Contribution.....	12
Certificate of Compliance with Length Restriction.....	13

Pursuant to F.R.A.P. 29, Consumers for Safe Cell Phones, Inc., files this brief as amicus curiae. CSCP is a nonprofit corporation formed in the state of Washington on August 11, 2011. Its mission is to educate consumers, government, and the general public on the health and safety issues related to the use of cell phones, and on the regulations at the federal, state, and local level that relate to such health and safety issues. Along with this brief, CSCP has filed a motion for leave to file a brief as amicus curiae.

The plaintiff argues that based upon its members' First Amendment rights, it is illegal for consumers to be provided known facts and government disseminated precautionary statements about safe use of cell phones at the point of sale. In addition to providing consumers factual information about the potential health hazards from cell phone radiation exposure, the City of San Francisco is simply requiring cell phone providers to publicize manufacturers' own warnings which appear in the fine print of all user manuals cautioning users to maintain a safe distance from their bodies during use. (See pages copied from manufacturer-provided User Manuals for Apple iPhone, BlackBerry and LG containing "body-worn" separation distance use warnings, which appear in the district court's record at Amicus Curiae brief, exhibit II - 1-5, filed on April 12, 2011.)

### **FCC Regulatory Background**

Cell phone radiation testing guidelines set by the FCC test in two basic positions on the body: 1) at the head/ear, and 2) when carried and used on the body/torso. In the first situation, the guidelines allow manufacturers to position a cell phone against a "dummy" (aka phantom) simulating a human head with a small separator simulating the ear for the duration of a relatively short phone call. Also, each cell phone model is tested for "body-worn" use while held up to 1" away from the phantom's torso simulating the radiation exposure when used *held*

away from the body in a holster or other carrying device that keeps the cell phone away from the body.

The rate of heat absorbed into the brain and body from the microwave radiation of a cell phone is called SAR (Specific Absorption Rate). For some unknown reason, the FCC does not require manufacturers to test for “body-worn” SAR when a cell phone is positioned directly against the torso (as in the manner in which many people use their phones, e.g.; transmitting in a shirt or pants pocket during a call while connected to an earpiece/headset). As stated in the FCC document “Evaluating Compliance with FCC Guidelines for Human Exposure to RF Electromagnetic Fields”: Supplement C to OET Bulletin 65, 2001, if a holster is not available to use during the exposure compliance testing, ***“a separation distance of 1.5 cm between the back of the device and a flat phantom is recommended for testing body-worn SAR compliance under such circumstances. Other separation distances may be used, but they should not exceed 2.5 cm”***. (Note: 2.5 cm = 1”). (Document appears in the district court’s record at Amicus Curiae brief, exhibit I, filed on April 12, 2011.)

Because cell phones are not tested directly against the body, but are allowed to be tested positioned up to 1” away in a holster to determine compliance with the federal safety standard, the FCC requires that consumers be warned to never use or wear their phone closer than this “separation distance” provided by a holster or they will be exposed to radiation that may exceed the federal exposure standard.

The FCC requires this consumer “separation distance” warning to appear in every user manual as mentioned in the above-referenced FCC document. This is the directive given to manufacturers in the compliance guidelines, ***“In order for users to be aware of the body-worn operating requirements for meeting RF exposure compliance, operating instructions and caution statements should be included in the manual.”*** (Evaluating Compliance with FCC Guidelines for

Human Exposure to RF Electromagnetic Fields”: Suppl C to OET Bulletin 65, 2001 – Document appears in the district court’s record at Amicus Curiae brief, exhibit I, filed on April 12, 2011.)

This directive for manufacturers to inform consumers about the “separation distance” safe use warning also appears on the FCC form granting the manufacturer final certification of compliance for a particular cell phone. The following statement appears on every cell phone’s grant of equipment authorization form, under the section labeled “Grant Comments”, “*End users must be informed of the body-worn operating requirements for satisfying RF exposure compliance.*” (FCC/OET TCB Form 731 - Grant of Equipment Authorization appears in the district court’s record at Amicus Curiae brief, page 5, filed on April 12, 2011.)

### **The Industry’s Myth of the 50-fold Safety Factor**

The plaintiff argues that it really doesn’t matter if consumers are informed of the manufacturer separation distance warnings for “body-worn” use or of precautionary statements disseminated by the World Health Organization and other health and safety experts regarding radio frequency (RF) emissions from cell phones - *because they claim the FCC cell phone standard has a 50-fold safety factor built in.* This is a false and misleading statement. Admittedly, it IS a fact that the FCC safety standard for exposure *from a distant source of RF emissions (e.g. transmitters and WiFi)* incorporates a 50-fold safety factor. However, this standard has nothing to do with the “near field” or “localized” SAR exposure from cell phones, which use a completely different standard.

Ronald Petersen, the plaintiff’s expert witness, also makes this distinction in his testimony previously submitted (filed October 4, 2011). On page 9, section 17, Petersen states, “To ensure an adequate margin of safety, the standards reduce the

threshold SAR value by ...a factor of 50 for exposures in uncontrolled environments (e.g.; the home, the general public, in which people are generally unaware of or cannot control their exposure.)” Note that cell phones are not mentioned in the list he provides as the factor of 50 only applies to the “whole-body” exposure standard.

Petersen then goes on to discuss how the IEEE later adopted the cell phone standard “for peak spatial-averaging SAR value of 1.6 watts per kilogram (W/kg) in any 1 gram of tissue for localized (as opposed to whole-body) exposure.” He distinguished this standard as different from the one mentioned in the previous paragraph by using the phrase, “as opposed to whole-body” exposure.

On page 10, section 21 of Petersen’s testimony, he references the correct federal statute governing SAR exposure from cell phones, “The regulation applicable to wireless handsets establishes a maximum SAR of 1.6 W/kg for spatial peak SAR as averaged over any 1 gram of tissue. 47 CFR 2.1093(d)(2)”

His next comment states his opinion that consumers need not be warned about the potential hazards from microwave exposure from cell phones, “This regulation assumes that users lack knowledge or control of their RF exposure and, as such, sets the exposure limit at a low enough level to eliminate the need for any warnings.” Not only is this comment unsubstantiated; it is factually wrong and misleading as the regulation he cites does not refer to cell phones at all. The statute following his opinion, “47 CFR 1.1307(b) table 1”, refers to the required evaluations for building-mounted antennas. The table 1 is actually titled, “Transmitters, Facilities and Operations Subject to Routine Environmental Evaluation.”

Below is the statement from the FCC document that discusses the basis for the ANSI/IEEE and NCRP safety standard.

*“Both the ANSI/IEEE and NCRP exposure criteria are based on a determination that **potentially harmful biological effects can occur at an SAR level of 4 W/kg as averaged over the whole-body**. Appropriate safety factors have been incorporated to arrive at limits for both whole-body exposure (0.4 W/kg for "controlled" or "occupational" exposure and 0.08 W/kg for "uncontrolled" or "general population" exposure, respectively) and for partial-body (localized SAR), such as might occur in the head of the user of a hand-held cellular telephone.” (FCC Office of Engineering and Technology, Bulletin 56 (1999), pg. 13)*

The 0.08 W/kg value established for “uncontrolled, general population whole-body exposure” does incorporate the 50 fold safety factor (as determined from the known **harmful**, whole-body exposure limit of 4.0 W/kg). [50 X .08 = 4.0] However, this 0.08 SAR value refers to exposure a human may receive in an environment in which they are not aware there is RF energy in the immediate vicinity (e.g.; from a transmitter, WiFi, etc). And, as Petersen testified, it sets the limit for heating of tissues from the RF microwave energy as averaged over the entire body.

This .08 W/kg limit is NOT the same as that used for the FCC safety standard for cell phone exposure. 1.6 W/kg is the SAR standard used for cell phone radiation, tested held up to the ear (with a spacer) and at the torso (up to 1 inch away in a holster). This 1.6 W/kg value as averaged over a small amount of tissue (aka localized SAR) is very different from the .08 W/kg exposure limit as averaged over the entire body; obviously, 1.6 W/kg *partial*-body SAR is not 1/50<sup>th</sup> of the 4.0 W/kg *whole*-body SAR at which “potentially harmful biological effects can occur.”

Petersen is well aware that the threshold SAR level is 4 W/kg; there is simply no way to show that the cell phone standard of 1.6 W/kg SAR is 1/50<sup>th</sup> of

the threshold value. The plaintiff's claim that the cell phone safety standard incorporates a 50-fold safety factor is factually wrong and should be disregarded.

The FCC document "Guidelines for Evaluating the Environmental Effects of Radiofrequency Radiation - ET Docket 93-62 (appearing in CTIA Second Amended Complaint filed October 4, 2011) on page 28, section 69 states,

*"For purposes of evaluating compliance with localized SAR guidelines, portable devices shall be tested or evaluated based on "standard" operating positions or conditions. In situations where higher exposure levels may result from unusual or inappropriate use of the device, instructional material should be provided to the user to caution against such usage."*

The FCC considers carrying and using a cell phone in a pocket or tucked into a waistband or bra an "unusual or inappropriate use of the device." Cell phones are assumed to be carried and used on the body held up to 1 inch away in a holster. Therefore, informing users of the required safe separation distance is a condition for compliance. If a manufacturer fails to inform users to hold the cell phone away from the body when in use, the cell phone is not considered compliant with the FCC safety standard.

In spite of being aware that the FCC requires that consumers be warned to never wear or use a cell phone directly against the body, the plaintiff represents U.S. cell phone manufacturers that engage in the industry-wide practice of deceptively hiding these consumer safety disclosures in technical language, printed in fine print and located in sections of the user guide where a consumer will rarely see them. (See pages copied from manufacturer-provided User Manuals for Apple iPhone, BlackBerry and LG containing "body-worn" separation distance use warnings, which appear in the district court's record at Amicus Curiae brief, exhibit II - 1-5, filed on April 12, 2011.)



Carrying and using a cell phone in one's pocket is a typical way these products are used by consumers. Many manufacturers advertise that cell phones are to be carried and used in a pocket; their small size makes pocket-use a convenient method of carrying and using when on the body. Yet, most cell phones will exceed the federal safety exposure standard of 1.6 W/kg SAR when used in a shirt or pants pocket or tucked into a waistband or bra (as is becoming common among young women).

Consumers have a right to know about the FCC-required manufacturer warnings "hidden" in the user manuals that caution users to keep cell phones away from their bodies during use.

### **FCC's SAR Testing Model Larger than 90% of the Population**

Ronald Petersen, (testimony filed October 4, 2011) states on pages 14-15, section 29:

*"IEEE Standards Coordinating Committee 34, which organized in 1995, developed IEEE Standard 1528 - 2003 ... (which) describes a protocol for peak spatial-average SAR compliance assessment that utilizes anthropomorphic-shaped phantoms of the human head ... derived from the size and dimensions of the 90<sup>th</sup>-percentile adult male head with the ears adapted to represent the flattened ears of the mobile phone user."*

In fact, the phantom is based upon a 6'2" man weighing 220 pounds; the FCC safety exposure standard for cell phones is based upon the rate of absorption of radiation into the simulated brain and body of an adult larger than 90% of the population. Therefore, if a specific cell phone passes the SAR compliance test at the highest acceptable exposure level, 90% of the population (which most certainly includes all children with their smaller brains and bodies and thinner skulls) would be exposed to radiation absorption greater than the FCC safety standard when

using that particular cell phone. This possibility clearly justifies San Francisco's precautionary warning regarding children and cell phone use.

### **FCC and FDA Regulatory Authority with Respect To Health and Safety**

The plaintiff claims that San Francisco has no legal right to take action to inform consumers of known safety precautions due to FCC regulatory preemption. How can informing consumers about federally-disseminated facts and statements from the FCC's own website regarding cell phone radiation emissions conflict with FCC oversight? On the FCC's consumer website "Wireless Devices and Health Concerns": ([fcc.gov/guides/wireless-devices-and-health-concerns](http://fcc.gov/guides/wireless-devices-and-health-concerns) - previously referenced in CTIA's Amended Complaint, filed January 21, 2011) appear precautionary safe use suggestions similar to what San Francisco includes on its fact sheet:

- “Some measures to reduce your RF exposure include:*
- Use a speakerphone, earpiece or headset to reduce proximity to the head (and thus exposure). While wired earpieces may conduct some energy to the head and wireless earpieces also emit a small amount of RF energy, both wired and wireless earpieces remove the greatest source of RF energy (the cell phone) from proximity to the head and thus can greatly reduce total exposure to the head.*
  - Increase the distance between wireless devices and your body.*
  - Consider texting rather than talking - but don't text while you are driving”*

The list of measures to reduce RF exposure on the FCC's website is preceded by the phrase, *“The FCC does not endorse the need for these practices, but provides information on some simple steps that you can take to reduce your exposure to RF energy from cell phones.”* San Francisco's fact sheet provides similar measures to reduce a user's exposure to RF energy from cell phones *if the consumer is*

*concerned*. The wording on the San Francisco fact sheet is simply precautionary in nature, in the same tone as used on the FCC consumer website.

The plaintiff also argues that there is no basis for consumer precautionary statements due to a single comment made on an FCC website that states that cell phones which comply with the standards are “safe”. The FCC, as the federal agency which certifies cell phones, does not have the regulatory authority to make statements regarding the safety of cell phone devices. The FCC refers all health and safety issues regarding cell phone oversight to the FDA’s regulatory authority, **“FCC relies on the FDA and other health agencies on health and safety related questions about cell phones.”** (FDA consumer website, “Radiation Emitting Products: Cell Phones”: [fda.gov/radiation-emittingproducts/radiationemittingproductsandprocedures/homebusinessandentertainment/cellphones/default.htm](http://fda.gov/radiation-emittingproducts/radiationemittingproductsandprocedures/homebusinessandentertainment/cellphones/default.htm) in the section titled, “Federal Communications Commission”. Note: this website is referenced on, and linked from the FCC consumer website previously submitted as testimony in CTIA’s Amended Complaint, filed January 21, 2011.)

On the same FDA consumer website mentioned above, under the section “Reducing Exposure: Hand-free Kits and Other Accessories”, appear the following precautionary warnings which are also similar in nature to the statements on San Francisco’s informational fact sheet:

***“Steps to reduce exposure to radiofrequency energy:***

*If there is a risk from being exposed to radiofrequency energy (RF) from cell phones - and at this point we do not know that there is - it is probably very small. But, if you are concerned about avoiding even potential risks, you can take a few simple steps to minimize your RF exposure.*

- *Reduce the amount of time spent using your cell phone*
- *Use speaker mode or a headset to place more distance between your head and the cell phone”*

The FDA is the federal regulatory agency with jurisdiction over cell phone health and safety. Information disseminated on the FDA's consumer website states that there may be a risk from being exposed to RF energy from cell phones. Therefore, they list "steps to reduce exposure" for those who are concerned.

San Francisco's consumer "right to know" law simply serves to provide consumers with the safe separation distance use warnings located in the fine print of the user manuals, as well as facts and precautions based upon statements from the World Health Organization and from the FDA's consumer website about the potential health risks of cell phone radiation and ways to reduce exposure. These publicized facts and precautions are necessary to help consumers make informed decisions about safe use of cell phones for themselves and their families; it will also inform consumers about making decisions regarding purchasing additional devices (i.e.; holsters, headsets, etc.) to help keep cell phones away from their heads and bodies. Consumers have a right to know the truth about cell phone radiation, its possible health risks and, if they are concerned, ways to reduce exposure.

### **Corporate Disclosure Statement**

Pursuant to F.R.A.P. 26.1, CSCP states that it is a nonprofit corporation organized under the laws of the state of Washington. It has no parent corporation, and there is no publicly held corporation that owns 10% or more of its stock, as it has not issued any stock.

### **Statement of Authorship and Financial Contribution**

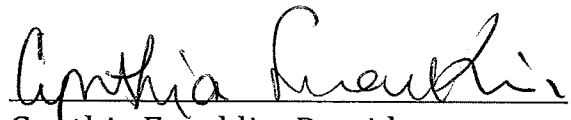
Pursuant to F.R.A.P. 29(c)(5), CSCP states that no party's counsel authored this brief in whole or in part, no party or party's counsel contributed money that

was intended to fund preparing or submitting this brief, and no person other than CSCP contributed money that was intended to fund preparing or submitting this brief.

**Certificate of Compliance with Length Limitation**

Pursuant to F.R.A.P. 32(a)(7)(C), CSCP certifies that this brief complies with the length restriction of F.R.A.P. 29(d) because it uses a proportionally spaced typeface that is 14-point, and it is less than the 15 pages authorized by F.R.A.P. 29(d).

Respectfully submitted,



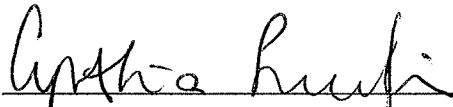
Cynthia Franklin, President  
Consumers for Safe Cell Phones, Inc.  
520 Ridgeway Drive  
Bellingham, WA 98225  
telephone 360-201-3959

**Certificate of Service**

I, Cynthia Franklin, hereby certify that on 1/2/12 I served the foregoing "Brief of Amicus Curiae, Consumers for Safe Cell Phones, Inc." on the following people by first-class mail:

Andrew G. McBride, Esq.  
Wiley Rein LLP  
1776 K Street NW  
Washington DC 20006  
*Counsel for Plaintiff/Appellant/Cross-Appellee CTIA-The Wireless Association®*

Vince Chhabria, Esq.  
Deputy City Attorney  
City Hall, Room 234  
1 Dr. Carlton B. Goodlett Place  
San Francisco CA 94102  
*Counsel for Defendant/Appellee/Cross-Appellant City and County of San Francisco*

  
Cynthia Franklin