Dear LAUSD Board Members:

Please vote no on this "Common Core Technology Project Plan" in its current form.

First, mitigate the huge amount of anticipated electronic waste and energy use. Please properly move forward with the necessary Environmental Impact Report (EIR) in compliance with the Environmental Quality Act, Public Resources Code, Division 13.

Second, as an EMF consultant, I recommend choosing wired technologies, especially for Internet access in schools and, in general, keeping RF radiation exposures from all sources as low as possible.

In this I follow the recommendations of the German Federal Office for Radiation Protection (2007), the Parliament of the Federal State of Salzburg (2007), the Israeli Parliament (2010), the International Commission for Electromagnetic Safety (ICEMS), the BioInitiative Working Group (2012), and the Seletun Scientific Panel (2010), just to name a few. Understand that with each additional wireless transmitter you add to the school environment, you unnecessarily increase the overall exposure to radio-frequency radiation for each student and staff member. Be inspired by other government agencies and school districts that try reducing the RF exposure of their students and staff members. http://buildingbiology.ca/wd/electromagnetic-spectrum/wi-fi/wi-fi-warnings/

Last year the Physicians' Working Group of the Competence Initiative not only launched another International Doctors' Appeal, but they also released another warning regarding Wi-Fi in which it says:

'Wi-Fi radiation seems to be perceived as particularly stressful. Not only electrohypersensitive people say so, but also healthy people report their discomfort in the presence of Wi-Fi radiation.

They complain of numerous symptoms and health problems, especially headaches, heart rhythm irregularities, difficulties concentrating, nausea and dizziness, tiredness. Even spontaneous muscle twitching, asthenia, and other symptoms can occur, as reported in the Freiburg Appeal.'

'We [physicians] therefore recommend foregoing the use of Wi-Fi and instead choosing wired solutions, certainly at home as well as at schools and preschools; in short, in all places where children spend extended periods of time.'

At this moment in history, in my opinion, the question is not if low-level RF radiation exposures can trigger biological effects (because they do) but the question is how significant

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the long-term adverse health effects will be. For a list of recent studies see the above Wi-Fi Statement. I urge you to apply the precautionary principle and create zones without wireless transmitters (incl. Wi-Fi, cordless phones, cell phones), especially in elementary schools.

Laboratory tests of laptops have shown that the exposure level for a user can easily be greater than 100,000 µW/m2 when the laptop is placed in the lap, which is definitely higher than even elevated urban RF levels. The recently released EMF Guidelines by the EMF Working Group of the Austrian Medical Association consider any level greater than 1000 µW/m2 'very far above normal,' and greater than 10 µW/m2 'far above normal.'

Do not be fooled by the URS report.* In my testing experience, people tend to adversely react to Wi-Fi radiation, starting at 100 µW/m2 (0.01 µW/cm2). And this is not a whole- body, time-averaged value, which would be much lower, but a peak value. The human body does not care about the 'accepted practice' of the FCC.

Also, basic logic seems to escape the authors of the URS report. On the one hand, they claim that 'a cautionary level of 0.1 µW/cm2 is attainable within LAUSD classrooms.' At what distance from any device? At the user distance? From one single Wi-Fi device? For any scenario when all devices in a given classroom are working? How can recommendation number 3 on page 1-2 be reconciled with number 6? Does this mean that the recommended cautionary level only applies to a single frequency band, i.e. Wi-Fi? What about cumulative exposure from all the different types of wireless frequencies?

Ambient exposure levels in a classroom with a Wi-Fi access point may range from 100-4,000 µW/m2 (up to 90,000 µW/m2), depending on a person's distance to the access point. Compared to the 10 million µW/m2 of the FCC limit, 1000 µW/m2 (0.1 µW/cm2) may sound rather small. Considering that the natural background radiation (in which human life has evolved) is over a billion times lower (ca. 0.000001 µW/m2), this may give you pause. For your orientation, I have compiled a table with the various Wi-Fi exposure levels. http://buildingbiology.ca/wd/wp-content/uploads/2012/10/Wi-Fi-Exposure-Levels-2012.pdf

The electromagnetic quality of our indoor environment is part of a healthy learning environment. Just because we cannot smell RF radiation does not mean it cannot cause any harm at low levels. Be smart; invest in wired networks and the future health of our children. Educate them about using wireless devices more safely. We have a choice. Low-emission electronic devices and installation methods should be used to create a healthy learning environment and to be inclusive of those who are electromagnetically hypersensitive. For inspiration, check out my paper on Low-EMF Office Environments.

Respectfully,

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*URS Report Page 1-1

'A review of international RF EMF protection standards reveals that the lowest value is 10 µW/cm2 (Russia, Switzerland) and the highest value is 1,000 µW/cm2 (United States).'

For the record, the lowest international RF protection standard is 2.4 µW/cm2 (Ukraine http://zakon4.rada.gov.ua/laws/show/z0488-96/page). Not 10 µW/cm2! 2.4 µW/cm2 can be easily exceeded at close range of a Wi-Fi access point or Wi-Fi- enabled tablet.

In addition, Switzerland issues an RF protection standard regarding cell tower radiation for sensitive areas, including schools and hospitals, that ranges from 4.2 to 9.5 µW/cm2. (http://www.bafu.admin.ch/elektrosmog/01100/01101/index.html?lang=de).

For a list of current exposure limits and precautionary recommendations see my table, including links to source documents: http://buildingbiology.ca/wd/wp- content/uploads/2012/09/2012-8-Cell-Tower-Guidelines.pdf

p. 3-10
The authors of the URS report make the following comment regarding the study by Foster from 2007 http://www.medfordumc.org/celltower/wifirfexposure.pdf

'The RF signal from most of the networks surveyed was usable by the laptop, but the signal was too small to be measured by the highly-sensitive RF EMF meter employed in the study.'

How does URS define 'highly-sensitive RF EMF meter'? The NARDA RF meter used in this study was unable to detect any signal below 100 μW/m2 (0.01 μW/cm2), the threshold level at which many people start reacting to Wi-Fi exposures. This statement lures the reader into a false sense of safety. For public health, an RF meter should be able to detect levels down to at least 10 μW/m2, better yet 0.1 μW/m2. The manufacturer of this particular RF meter usually suggests using the SRM 3006, instead of the SRM 3000, for exposure assessments regarding public health. Instead of average values peak values should be monitored.