Wi-Fi® Networks and Health

Wireless Local Area Networks (WLANs) (also commonly referred to as Wi-Fi networks) use radio waves to communicate in much the same way as those used to broadcast radio and television, as well as to make and receive calls on a mobile phone. The safety of radio communications have been extensively studied for more than 50 years, and more recently this has involved looking specifically at the safety of wireless networks. The current consensus of the scientific community is that there is no scientific evidence that WLANs pose any health risk.

The World Health Organisation's (WHO) latest fact sheet on wireless networks states:

> *Considering the very low exposure levels and research results collected to date, there is no convincing scientific evidence that the weak RF signals from base stations and wireless networks cause adverse health effects.*

Furthermore, the WHO says:

> *Recent surveys have indicated that RF exposures from base stations and wireless technologies in publicly accessible areas (including schools and hospitals) are normally thousands of times below international standards.*[1]

A University of Pennsylvania study published in March 2007 undertook 356 measurements at 55 Wi-Fi sites in four countries under conditions involving higher than normal exposures. The study found RF fields from WLANs in typical environments operate far below exposure guidelines:

> *In all cases, the measured Wi-Fi signal levels were very far below international exposure limits (IEEE C95.1-2005 and ICNIRP) and in nearly all cases far below other RF signals in the same environments.*[2]

The United Kingdom's Health Protection Agency (HPA) has recently updated its fact sheet[3] saying the signals from Wi-Fi and WLAN equipment operate at very low power levels and pose no health risk:

> *There is no consistent evidence of health effects from RF exposures below guideline levels and therefore no reason why schools and others should not use Wi-Fi equipment.*

In fact, a HPA survey found WLAN emissions were well below the safety guidelines:

> *The HPA has made measurements of the power density of radio waves generally in and about the offices where WLANs are deployed and these have always been found to be very much below the guideline levels referred to.*

Based on this scientific evidence and opinion there is no reason why we should not continue to enjoy the enormous benefits that this technology provides.

This viewpoint was produced in conjunction with the Wi-Fi Alliance.

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[1] http://www.who.int/mediacentre/factsheets/fs304/en/index.html

[2] Foster KR. Radiofrequency exposure from wireless LANs. Hlth Phys 92:280-289; 2007

[3] http://www.hpa.org.uk/radiation/understand/radiation_topics/emf/wlans.htm