

# Workshop F : Micro-Electronics and Silicon Design

*This is your opportunity to hear about the strengths and potential of the micro-electronics and silicon design business sector how the LEP could support their further development and to give your views*

**Professor Mark Beach, University of Bristol**  
**Phil Morris, ST Microelectronics (R&D) Limited**



# Microelectronics: The enabler of Communication Networks

Professor Mark Beach,  
Centre for Communications Research,  
University of Bristol  
(Email: [M.A.Beach@Bristol.ac.uk](mailto:M.A.Beach@Bristol.ac.uk))



# 🌿 Connecting People



Tasks  
Gaming  
Financial  
Entertainment  
Calendar  
Health  
Security  
Social  
Media  
Music



News  
Video  
Location  
Information  
Messaging  
Networking  
Transport  
Contacts  
Safety  
Photo



6.5B Apple downloads to date, 1.4B Android  
....and you can even make a telephone call

Photo source:  
CSR plc and UKTI

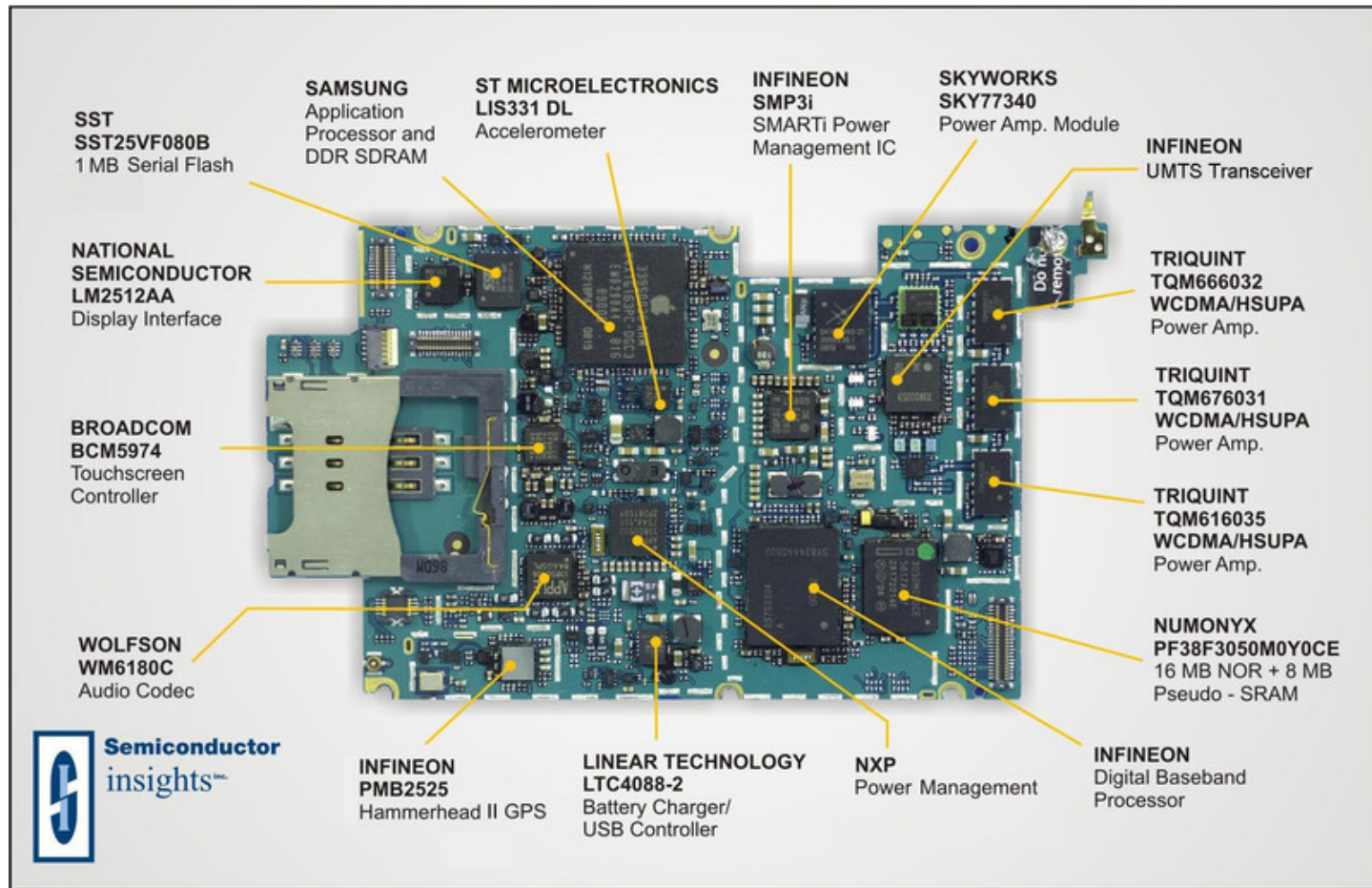


# 🌟 Digital connected world – the future

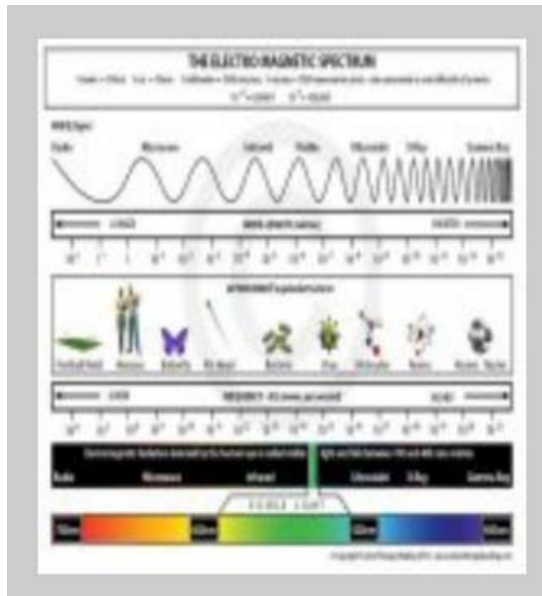


- 1995 – 5 Million mobile connections
- 2010 – 5 Billion mobile connections
- 2020 – 50 Billion mobile connections (GSMA)
- 2020 – 7 Trillion wireless connected 'things' (WWRF)

# 🌟 iPhone: UK designed?



# 🌟 Opportunities for growth



Digital Dividend spectrum estimated value to the UK economy of £7.5B over the period up to 2026 (excluding the proceeds from any auctions) [1]

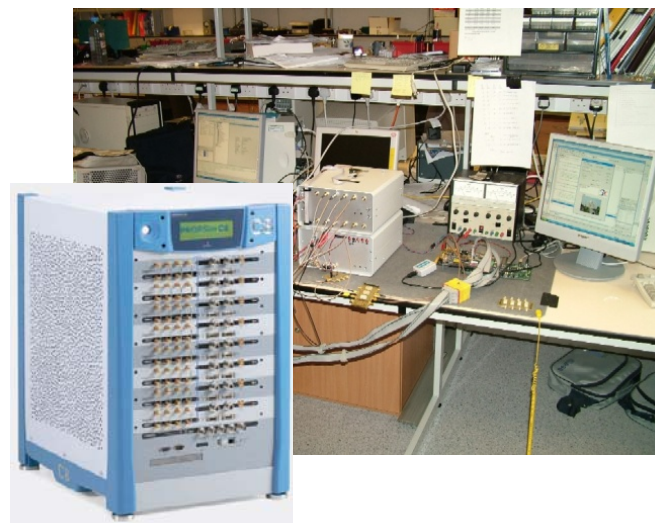
Potential delay of one year will result in a reduction in this value of approx. £400M

Release of spectrum at 800MHz & 2.6GHz for mobile internet access. (Ed Vaizey [2])

1: DC-KTN, '2009 UK R&D Analysis'

2: <http://www.bis.gov.uk/news/speeches/ed-vaizey-open-internet>

# 🔥 Enabling Further Innovation in SW UK



Graduates:

UK Electronic Skills Foundation [1]

Postgraduates:

CDT in Communications @ Bristol [2]

[1] [www.ukesf.org](http://www.ukesf.org)

[2] [www.bris.ac.uk/cdt-communications/](http://www.bris.ac.uk/cdt-communications/)

State of the Art Test & Measurement

Antenna / RF Characterisation

Wafer Probes

Digital emulation and test

Space for companies / start-ups

Set-Squared & Bristol Science Park