

Written interview with Dr. Peter Cochrane, Keynote speaker at the FTTH Conference 2012



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FTTH Council Europe: *As a visionary engaged in the solving of problems and the creation of wealth through the application of new technologies and business solutions, what does FTTH mean to you?*

Dr. Peter Cochrane: We stand at the brink of a second industrial revolution that will be defined at the interface on nano-tech, bio-tech and ITC. This will realise new materials and devices that are built a molecule/atom at a time, and in some cases will possess inherent programmability - and thereby will transform the way we design and manufacture components, clothing and goods. In turn it will also see new sensor, display, memory, and computing technologies that will transform food production and supply, industry and distribution, health and care services.

We can anticipate that it will also change the way we manage societies with growing/ageing populations and our limited resources. Moreover, it may be the only route to providing 'more for more people, using less material and energy. At the heart of this change will be communication - bandwidth on demand fixed and mobile - to every office and home - and FTTH is at the core of this essential need. How come? It will enable a new world of distributed resources and working that will span the planet - in fact this will enable a true globalisation of human, machine, information and material resources!

Less tractable is the impact on a world of increasingly intelligent things. AI (Artificial intelligence) systems and robotics now controls much of industry, banking and medicine and when combined with sensor networks they are core to our understanding and coping with an ever complex world. Fast and timely communications to, from and between a growing number of 'smarts' is key to a revolution that will help us manage our resources, avoid unnecessary waste, and the worst effects of future natural and manmade disasters.

FTTH Council Europe: *What was your motivation for being the keynote speaker at the FTTH Conference 2012 in Munich?*

Dr. Peter Cochrane: To provide a vision from the outside world of why FTTH is so fundamentally important, and to step beyond the confines and thinking of the telecommunications industry. It is clear that we are migrating toward a 'smart planet' and FTTH is going to be core to providing the essential bandwidth for rafts of new appliances, devices and industries that will be both fixed and mobile. Without adequate bandwidth everywhere we will see economies stall, societies overtaken, and the supply of everything rapidly migrate to be 'dangerously uneven and unpredictable'. We have to understand that FTTH is far more than playing games faster, watching movies on line, and new revenue streams - it is the only technology that can satisfy the needs of fundamentally new industries that will be born of new technologies allied to working across global markets.

FTTH Council Europe: How do you see the future of broadband in Europe?

Dr. Peter Cochrane: Today Broadband Europe is a 'patchwork quilt of make and make do' solutions involving DSL, Cable, 3G (++) that is gradually being pulled in the direction of FTTH. What a lot of people do not realise is that FTTH is also central to the completion of the 3G revolution and a key component of the coming migration to 4G. By embedding WiFi, 3G, 4G (+++) into the FTTH installation we can achieve full wireless coverage and eradicate not spots more economically than by any other mechanism.

Another feature of FTTH that is very often overlooked is that it has the ability to reduce operating costs by 90% compared to copper, and is, to all intents and purposes, infinitely extendable in the future.

About Dr. Peter Cochrane:

OBE, BSc, MSc, PhD, DSc, CGIA, FEng, FRSA, FIEE, FIEEE,

Peter is a seasoned professional with over 40 years of hands on technology and operational experience. He has been involved in the creation and deployment of new technologies, the transformation of corporations, and the starting of many new businesses.

His career in BT saw him progress from a maintenance technician, to a planning and R&D engineer before he became Head of Research and then CTO. With a 1000 strong team engaged in studies spanning optical fiber, fixed and mobile networks, Peter was responsible for developments that would support future IP, eCommerce, eRetail, eLogistics and many other new businesses. Peter's PhD was pivotal in BT deciding to go all-digital and all-optical in the 1970's, and he played a key technology role in a downsizing of BT from 242,000 to 110,000 people in the early 1990s.

In 1986 Peter 'engineered' optical technology to provide FTTH at cost parity with copper on new install. By 1990 BT had developed a full FTTH strategy and roll out plan that was then terminated by The Thatcher Government in 1991 on the basis of being anti-competitive at that time, and as a basis for increased market competition. Almost precisely 20 years later Peter and his team were called in by Jersey Telecom (UK Channel Islands) to address the FTTH issue. On this occasion a full FTTH was designed agreed and implemented with a positive R-o-I from day one. So far all offices on the Island have been provided with bi-directional bandwidth at 1Gbit/s, and the roll out to homes is underway with completion scheduled in 2013 for the 96k population.

In other assignments Peter worked with MCI/WorldCom on the upgrade of their Optical Networks and the interaction with mobile services, and more recently he has been involved with BP et al in Cloud Computing and the design of systems plus security issues in this emerging arena.

Peter has also spent time in academia as an educator and was appointed as the UK's first Prof for the Public Understanding of Science & Technology @ Bristol in 1998. A graduate of Nottingham Trent and Essex Universities, Peter has received notable recognition with the Queen's Award for Innovation & Export in 1990 and Honorary Doctorates from Essex, Robert Gordon, Stafford, Nottingham Trent and Brunel Universities. He was awarded an OBE in 1999 for contributions to international communications.

About the FTTH Council Europe:

The FTTH Council Europe is an industry organisation with a mission to accelerate the availability of fibre-based, ultra-high-speed access networks to consumers and businesses. The Council promotes this technology because it will deliver a flow of new services that enhance the quality of life, contribute to a better environment and increase economic competitiveness. The FTTH Council Europe consists of more than 150 member companies. www.ftthcouncil.eu

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