

## **'IP goes mainstream'**

the speech by

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The world changed for everyone in the communications industry the day we learned to digitise everything ... from voice and data to still images to video.

Once digitisation became easy, convergence became inevitable ... but convergence has been waiting for a platform on which it can be delivered easily and efficiently.

The Internet came along and it brought with it something called Internet Protocol ... or IP ... a new and disruptive technology platform that had the potential to deliver services ... cost efficiently and in a converged way.

IP grew up and it began to change the way we think. It opened our minds and fuelled our imaginations.

IP promised to make the world completely and irrevocably network-centric ... and change the way we all live our lives, both personal and professional.

The promise of IP inflated our expectations and, with them, a global economic bubble

And then the bubble burst ... spectacularly.

So where do we go from here? The question for today is how and when IP will become mainstream.

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Good morning ladies and gentlemen.

My name is Paul Reynolds. I'm delighted, on behalf of BT, to have the opportunity to speak to you this morning on one of the most talked about subjects in our industry ... the fourth revolution ... the IP revolution.

This year marks the 25<sup>th</sup> anniversary of the FT World Telecommunications Conference. We are here to look ahead to the future. Thank you to the FT for inviting me to speak and congratulations on 25 years of support for our industry.

But I thought it might be interesting to look back a little ... to the first FT World Telecoms Conference held here in London 25 years ago.

In 1980, the UK Government was preparing to do something with the Post Office ... and in preparation, the telephony arm of the Post Office was given a new name. The name 'British Telecom' was created.

Competition in the telephony business was embryonic ... it would be another two years ... 1982 ... before the Government would licence another telephone company – Mercury Communications.

But 1980 was also the year when the first digital telephone exchange was installed in BT's network.

The development and rollout of digital exchanges was at the heart of that era's big transformation challenge for our industry ... the modernisation of our underlying infrastructure ... from analogue to digital switching.

The transition to digital would enable the delivery of new, smarter ... primarily voice services ... for people to use. We were also starting to see the early adoption of data.

So let's move forward 25 years ... and much has changed, but we're once again at the birth of a new era of transformation and opportunity.

Today, the UK has the world's most competitive communications marketplace in the world with over 650 communications providers competing.

This competition, together with technical innovation, is driving radical change, new competition, new services and significant price erosion in our industry.

This combination requires all of us in our industry to take action every year and take significant costs out of our businesses ... just to stand still. It's tough.

Some of these 650 businesses are fixed line operators. A few are mobile operators. We also have a thriving number of Internet service providers offering both dial up and ... increasingly ... broadband internet services.

There's also a range of other service providers ... offering, for example, CPS calls and there's a new type of competitor emerging – companies like Skype ... or eBay, Vonage, Microsoft and Google.

New entrants trying to capitalise on the commercial opportunities of IP.

So today, 25 years on from the transition to digital, we're facing another transformation challenge – one that ... curiously enough ... will enable the delivery of new, smarter services for people to use.

But this time, it's bigger. It's more radical. We are making the leap from digital to IP. Making IP mainstream requires a fundamental re-writing of the

rules of our industry, and not just the replacement of one infrastructure with another.

So if you accept that IP becomes mainstream when the mainstream goes IP, then I think it's fair to say that we're well on our way. But there's much, much more to do.

The combination of intense competition, price erosion and the desire to bring a wealth of converged services to people ... led BT, a few years ago, to make the decisive decision to move to an all IP infrastructure. We call our programme the 21<sup>st</sup> Century Network.

The programme has three goals – to enhance the customer experience, by giving customers more control and flexibility over how they choose, use and change services themselves ... when and where they choose to;

Two, is to enable us to bring these new products ... converged products ... to market faster than we can today – from an average of 18 months to less than six months;

And thirdly to take significant complexity and cost out of BT's business – this is critical if a business like BT is to continue to deliver the increasing levels of value the market and end users demand ... and still be able to invest in innovation.

We announced our plans for 21CN in June last year – they were welcomed as radical and exciting ... and award winning! ... and the level of interest from other operators around the world has been unprecedented.

Today, we are heavily involved in preparing to roll out 21CN to everyone in the UK. We're starting in Cardiff next year and the rest of the UK over the subsequent three years.

But we have 2000 people working on the programme within BT today. Many are working in Cardiff and around the country as I speak to you preparing our estate for the arrival of new equipment, developing new systems and building new nodes.

BT will be the first telecommunications company in the world to switch off its Public Switched Telecommunications Network (or PSTN) and move our entire business to IP.

I said the move to 21CN is more radical than the switch from analogue to digital. And it is. It creates opportunities for all the 650 businesses competing in the UK who interconnect on BT's core infrastructure. But for many, radical change can also be seen as a threat.

In recognising this, we created a programme of industry consultation last year. We call the programme Consult21.

It's designed to give the industry an opportunity to get involved, to understand what we're doing, and to participate and influence our plans.

We made a strategic decision early on that openness and transparency are key requirements to success in a programme of this scale and magnitude.

Outside the UK, we're starting to see other incumbents operators starting to follow BT's strategic lead.

Over the last few months, we've seen similar plans announced by a number of operators around the world. The most recent to announce their plan was Telstra in Australia.

So if IP goes mainstream when the mainstream goes IP, there's real momentum building across the globe.

21CN is big. It's challenging. But given the amount of change going on in our industry at the moment, standing still isn't an option.

We at BT believe we need to be radical. 21CN is radical.

But IP isn't new to BT. Today, almost seven million homes and businesses in the UK subscribe to broadband services based on BT's DSL technology.

But BT isn't a UK business and 21CN isn't a UK programme.

In fact, outside the UK, we have the largest global IP network of any communications provider ... and we plan ... over the next two years ... to double the size of that global network.

We're adding a new world city onto our network each week at the moment ... and will be operating a global IP/MPLS network across 160 countries by 2008.

In fact, around 40 percent of BT's workforce has highly developed IP skills today.

That doesn't make it easy. It's exciting, but a little scary being the first to take on a programme like 21CN. Being the first has advantages but there's no manual you can buy to show you how to do it.

But we're doing it.

And there's much to think about.

Transforming an industry means that the new stuff we implement **MUST** deliver at least the same quality, reliability, security and resilience as the old stuff. Preferably ... ideally better.

The world's leading standards bodies and equipment vendors are working closely ... and BT is actively participating too ... today to ensure that IP is truly carrier class.

We're also looking to break many of the old practices of the past – we're aiming to build 21CN on open standards with a radically different commercial basis to that we've had in the past.

And we're getting there – that's an example of the benefit of being first.

But why does all this matter? Why is BT ... and now others ... doing it?

The answer is relatively straightforward. We in BT are doing it first of all for BT's own operational efficiency.

Installing an all IP network allows BT to strip away a great deal of legacy ... of waves of technology, complexity and cost that have been accumulated over more than a century of providing communications services in the UK and overseas.

But we're also doing it so that we can bring a new range of compelling converged services to our customers ... wherever they are in the world ... and to our customers' customers.

We want to make our customers' experience of dealing with BT simpler. We want to make the way people use our services easier. And we want to make our customers' lives and businesses easier and more efficient.

Wave after wave of innovation has combined to make our lives and the way we use communications complex.

Most of us have a fixed line telephone. A broadband connection connecting our PC to the world. A mobile telephone. Many of us have blackberries ... and iPods. Just managing the range of chargers we have to carry is getting out of hand.

But people want to access services wherever they are, over the device they happen to have, whenever they want.

Whether they're at home, in the office or on the move.

People don't want to be constrained by geography, by time or by the available speed on a specific service or capability built into a device.

People want the freedom to choose the way they communicate ... on their terms.

Maybe we want our emails read to us over our mobile telephones when we get a coffee break later this morning ... or our voice mails delivered to our blackberries as written text this afternoon.

You may want to choose a new service tonight and change it tomorrow. And you won't want to be constrained by available speed when you want to see your country's goal celebration live during the world cup in Germany next year.

The distinction between voice, data and video is blurring. I said at the outset that our industry changed the day we learned to digitise all this stuff.

We're now at the early stages of being able to use this capability in the form of converged services. 21CN will deliver this and I believe we're only starting to scratch the surface of what this capability will mean.

That's why we're doing it. We're investing heavily to deliver it ... about £10 billion between now and the end of the decade. It really is that important.

But you know it would cost us more in the longer term if we stick with maintaining our legacy networks, systems and practices.

Of course, all of this has some pretty significant implications for our industry as we see it and understand it day. Think about it.

In a truly converged, IP world, people will no longer want to differentiate between their mobile service, their broadband service, their fixed line service.

That means they won't want to differentiate between these different service providers either.

It follows, therefore, that service providers that can't offer the flexibility of an integrated service in the way and on the device that customers want ... will start to lose their strategic relevance.

But that doesn't mean that convergence and the IP are threats ... to today's ISPs, to mobile operators, to fixed line operators.

In fact I think it's a major opportunity – for BT, for you.

Massive change is always de-stabilising. But so too is a lack of progress – especially in our industry – which thrives on innovation, on new technology and new opportunity.

To answer the question behind this session - I believe we'll know that IP has gone truly mainstream when we all divest ourselves of our functional descriptors ... like MOLO, OLO, ISP

... when we start to see ourselves as integrated communications companies with a mission to provide our customers with the service and experience they want ...on their terms ...

And our customers start to see us in the same way.

I wish you good debates and insights on the final day of this year's FT Telecoms World Conference and on your journey into the future.

Thank you