

Graham Cradock, Executive Vice President and General Manager, Asia-Pacific.



Roger Bolton, Vice President of Business Development.

needs. You can also combine that, certainly in the next phase with some other telephony services. Not only fixed but mobile so you can have voting systems which is when there's no linkage to the TV content and the telephony. It's gained a poor reputation elsewhere in terms of voting when the show's over and so on. If you link on an IP system the voting to the content, that's something that would never happen. You can have parental control when your children are at home. Ericsson can now send you a text message that asks 'is your child allowed to watch this programme?' so you're building a much more converged system between lifestyle and television which you don't get with linear broadcast television. So that is what IPTV is.

Question: Can you explain why you think it is becoming so popular? Is it that flexibility that it offers?

RB: At the moment there's only five million users worldwide. The world's largest user base is in Hong Kong but the rest at the moment only adds up to I would say 1.5 million.

Question: So it's still very much in its infancy?

RB: Yes, but it is getting momentum and that I think is being borne of two things. The first is the convergence of the TV and the PC so where are you being entertained? – on your TV or your PC? That's making the story popular and at some time your PC may become your set top box so you can plug your television into your PC to have what we call the ten-foot experience but if you're watching on your PC you're probably having the two foot experience. Later if you're watching on your mobile phone you'll probably be having the 2-inch experience so it's a convergence of video and that what's exciting people I think. It's the fact that they're not going to be tied to one location in their living room watching their content.

GC: But I think that the fundamental thing is that now it is proven that you can run a business this way, it's the fact that it is not popular at home there's no concept of what it is and for most people it's just a cable service and there's no distinction. I think that a lot of what we're talking about will be added later on so the key thing is that it's proven as an add on business for telcos and because the telcos are under threat as Roger has said, and are losing their telephony revenue to cable or Skype they need to build up other revenue streams.

Historically, they have tried this already, this is the other important point, that maybe there has been a delay in the market because they have tried several times with just the Video on Demand piece and when they tried to sell that service it didn't gain any traction because they didn't combine it with your

Still in its infancy?

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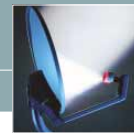
Question: Can you tell us about IPTV – what it is and how it works?

Roger Bolton: Just to give you a brief idea so you get to know the breakdowns here – from a telecommunications point of view, IPTV is the delivery of television services combined usually with telephony and Internet access so a triple play service across a telecommunication line or your phone line. So that could be fibre if it's a very new installation in which case you've got lots of bandwidth but more likely it's going to be copper telephone cables to the home where your bandwidth is severely restricted and what they want to do is to give a very good television service maybe on demand television as well as linear broadcast television over that network as well as a fair chunk of bandwidth for you to do your Internet access, your web surfing and your telephony as well. The reason they're doing that in some instances is to protect the market to stop it being grabbed by cable companies who are also offering that sort of service. Now the telco has a particular advantage in that he doesn't have to go out and dig up all the streets to lay new cables to the homes - they're already there

so they're using existing infrastructure to deliver these services

Graham Cradock: It's their existing customer base basically. Those people have been there for years and they're used to paying their telephony bill.

RB: And they've got billing systems, support services, call centres, everything set up already so by adding these video services over this network they're hoping to not only keep their customers but to get more customers and to get more what they call ARPU which is average revenue per user. So they're trying to bring in more money offering television. Now the first phase of that is very much like the television service that you and I are used to in the home – watching your linear broadcast television. The next phase of that is to provide on demand services so you could be the audience of one and build your own television service based on what is being broadcast in real time such as news content and sport content and archived content that you missed or you want to watch again. And with that sort of service over an IPTV network you can pause it, fast forward it, rewind it and tailor that service to meet your



regular TV and people like to have their normal TV as well and what they have realised this time is that people aren't used, or weren't used to getting TV when you want it so it's a customer education process if you like. What IPTV operators do now is to offer a TV package which is exactly like the one you would get on cable. It's being helped by the Internet so you get what you want when you want on the Internet so then they can start to lead people across to the new way of watching TV and taking what you want when you want it. So I think it's been pretty much proven to work now. I think there were a few technology questions as well over the last ten years but they're all completely sorted out now.

Question: What kind of IPTV services does Tandberg TV offer?

GC: We are a product manufacturer. It's probably easier by starting off saying what we don't do. The key pieces are really a television head end, a network to deliver that to the home and then the set top box – a normal set up exactly like any other pay TV environment. It's like satellite or cable. There's a box in the home and there's a head end. The head end is the piece that brings television in from some source. It might be off one of the other networks like a satellite or it may be from a local supplier. We then compress that – we basically push that content into the network and the network then delivers it to the set top box and the viewer then gets to choose between the different channels.

So that's basically what we do and the enabling process for that is called compression. The thing that's really enabled IPTV as Roger said is that most of the connections to the home are based on the copper that has been in the ground in most cases for many, many years and that has been upgraded to have a much higher bandwidth for broadband. But although that is called broadband it is still fairly narrow in television terms. So what we've done with our MPEG4 solutions is create the best possible television experience but using the lowest possible bandwidth and the lowest bandwidth gives you the greatest penetration to your customer base. So if you are a telephone operator you have millions of customers but they're all at different distances from the exchange and the distance from the exchange affects the bit rate and the bandwidth that they receive so the smaller that you can push the requirement for the TV channel the further it can go and so we enable that whole process with our core MPEG4 compression capability.

And in terms of in stored base of that we are the market leader with about 40 percent globally so that's a pretty big share in a new emerging market but that's only part of the story. From my point of view in many ways that's the underlying enabler and typically

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compression is what makes sure there's choice and you need to have one of these compression engines per channel. So the compression allows you to send more channels in the same space compared to what you could send on an analogue system before.

So it enables choice but really it's about cost saving because you don't need to roll out fibre to the home so it's just a fundamental enabler. But what Roger was talking about earlier was this on demand experience and different ways of consuming TV whether it's across different platforms or exchanging a mobile handset and a set top box in the home. In those cases the on demand service is much more prevalent, the way of watching what you want when you want it and what we're doing there is building the backoffice software system to manage that whole process so how you get allocated the content and make the request. So you have a catalogue of movies and we have an onscreen catalogue where you can flick through all the DVDs, or it could be movies or it could be sports events or catch up TV or it could be a whole series which is catalogued and presented to you in such a way so that you can find just a certain episode. We manage that connection to the home and it's the connection then to the storage and there's an archive there that you can access. The other important thing is that unfortunately you're going to have to pay for this and the first way you can pay for it is directly so there will be a billing system that checks that you're allowed to watch it and that you're in credit so we provide the software that does that. But moving onto the next step, it has been found in the US that most people aren't too keen (and as I said before it's part of an education process) on paying for TV in that way and so most of this on demand experience has been given away for free.

The reason it's being given away for free is that it does actually work very well to keep customers on your network so it reduces churn which is very important as it stops people leaving and moving across to another network so there's a benefit to it. But how can you get some money back? We have

worked with some of our customers to develop a specific advertising product that enables them to manage a campaign by placing adverts at the front, the back and in the middle of programmes. The business model to their customers is then if you are prepared to take adverts in this video on demand stream then we will not charge you for that video. The very unique thing about IPTV and I suppose Mobile TV is the two-way connection. You know who is connected and you have demographic knowledge of who they are, how they pay their bill and those kind of things so you can dynamically target the ads and you can build up a campaign of ads that's actually like direct mail.

RB: But this is personalised direct mail so that's the next type of advertising that's going to come. But even if you discount advertising, IPTV allows you to have precise viewing figures for particular programmes and that means that the programme makers when they get sufficient mass on IPTV can actually know exactly what content is appropriate to their audience and they can start making more relevant programmes. Then they can start targeting specifically and say that ad was watched by x million people on that day. When you've got that sort of information you can formulate your rate card.

Question: What does the Asia-Pacific region mean to Tandberg TV? Is this the place where it's all going to take off?

Graham: Asia-Pacific has always been important to Tandberg TV. In our history, we launched our first services in the region so we've been there a very long time and we've found it a pretty sequential market in terms of trends so one year, everybody's running a satellite system and clearly now everybody's running an IPTV system. And the issue is that every time the next phase comes along, the issue is getting the regulation sorted out. It's tough in the Asia-Pacific. And I think to put it into a slightly bigger context if you were to look at our parent company Ericsson they see Asia-Pacific as the fastest growing region economically and they also realise that it is incredibly localised and they do characterise the market as they would the US and Europe so they see the world split into three relatively equal chunks. But we're not in the position to be able to say that because the AP region broadcast sector at the moment is quite far behind in terms of deployment and in terms of consolidation which hasn't happened very much.

RB: On the other side of that coin if you read all of the market research reports they're all forecasting that IPTV will be bigger in APAC than anywhere else in the world so that's why it's a focus for us in this region

GC: And broadband numbers lead the way on that story. The amount of broadband connections means it will be relatively easy to bring in IPTV. ■