



Modems driving demand

Comtech EF Data's modem business is booming and especially in the Middle East and Africa. Satellite Evolution spoke to Daniel Enns, Senior Vice President, Strategic Marketing and Business Development to find out more about modems and how they affect the business.

Question: Thank you very much for your time, Daniel. Can I begin by asking you about the integral role of the satellite modem within satellite communications. What functions does the modem perform?

Daniel Enns: This is a very valid question. A modem is one of the few pieces of technology that governs a link, that governs the availability of a link and that governs the efficiency of a link. The modem directly controls the business portion of a business because it controls how much resources you are going to use on a daily, monthly or yearly basis. So in essence you could say that nothing is going to happen without the modem.

The modem is the heart, soul and control point of the whole business. It is absolutely



integral. Granted – we cannot receive a signal without an antenna but this is a rather passive device that either works or doesn't work and this component doesn't actually change what it is. An amplifier sits before the modem and it is all about stability. But the amplifier is what it is. Outside of reliability, it does not influence more than that. A modem, on the other hand, controls in a dynamic way your data, your throughput, and the ability to reduce cost and do more with less.

Question: How do Comtech EF Data's modems help customers to get more out of their satellite links?

Daniel Enns: How we actually achieve this is more of a technology discussion. But on the practical side, it is about doing two things. Firstly, to reduce actual bandwidth occupied and secondly, to reduce power. Those are the two resources on satellite that dictate cost. The modem does this through the use of Higher Order Modulation and through the deployment of more efficient Forward Error Correction or FEC. Forward Error Correction controls how much power will be required and higher order modulation allows us to do more bits per hertz and to control the efficiency.

Question: Since we last spoke to you, Comtech has started high volume production of the CDM-625 next generation satellite modem. What are the unique selling points of this modem?

Daniel Enns: The unique selling feature of this modem is that it, first of all, provides to the telecommunications user a future proofing interface and migration path. From

a benefits perspective its value comes from the innovative new FEC that is incorporated, for example, low-density parity codes and our award winning patented carrier-in-carrier Double Talk solution.

It is this combination of low-density parity codes which reduces even further the power required on the satellite as well as on the ground when combined with the carrier-in-carrier solution. This really starts giving a level of efficiency that is on the whole at least a 20 plus percent improvement on anything else on the market. The operative can actually exceed the 40 –50 percent mark but on the whole, it is at least a 20 percent improvement compared to anything on the market today.

Question: Do you see the CDM-625 playing a role in markets that are currently struggling for bandwidth?

Daniel Enns: Absolutely. Today it is the flagship modem in regions such as Africa and the Middle East. It is, ironically, making capacity available.

Every satellite service provider has to explore ways of redeeming his existing capacity so that he can make room to re-sell it again. He would like to simply go and buy new capacity but that is a dream right now. So, very systematically, system providers are taking existing links, replacing them with modems such as the CDM-625 just to make room, capacity-wise, in order to provide new services.

It is almost like a capacity generator. It optimises the existing capacity of the service provider so that they can start to provide new services on existing capacity.



Question: From a research and development angle, where do you think you will be taking satellite modems to next? What will future modem technology look like?

Daniel Enns: Looking at the crucial role that the modem plays there has always been, especially in Ku-band satellite links, the leaving of an additional margin available for when atmospheric conditions become worse – such as rain fade.

The extra margin that we leave on a link can be taken advantage of by the satellite operator through Adaptive Coding Modulation (ACM). That is definitely the area of technology that we are working on today. You will see this in all our modems, especially the newer ones.

We will be announcing new releases that support this so that we can take advantage, in a more dynamic way, of power bandwidth on the satellite.

For these modems we are looking at areas such as some parts of Africa, where new satellites will be coming online and the addition of ACM will be a great asset.

Question: In this unstable economic climate, customers will be looking for ways in which they can save money. How can Comtech EF Data save their customers money through a wise modem choice?

Daniel Enns: You are correct. The availability of money today needs to be explored in terms of new and existing services. We are finding that new programmes and services may be curtailed somewhat due to the limited availability of funds or liquidity and banking that extends particular funds for doing these type of projects. We are finding our business shifting from new business to asking how can we help our customers trade their operating expense so that they can do better with what they are already committed to. So it's a double edged sword. On the one hand it incentivises us to become better and more efficient at whatever we are doing to get more business, whilst on the other hand it is also about curtailing new projects and programmes because of the non-availability of money.

The current situation has two sides to it and we are at least trying to get the best out of at least one of the sides for the moment whilst we wait for capital to free up. We see certain geographical regions being particularly challenged by this problem.

Question: Focusing on the EMEA market, where is Comtech doing business at present?

Daniel Enns: The African continent is certainly a hot bed for us. Actually, it is strictly technology business that is motivating the requirement. Unavailability of new capacity and the grass root requirements in the

emerging markets especially for mobile backhaul is driving Africa almost insatiably towards needing to find out how to optimise existing capacity from the tip of South Africa to North Africa. It is strongly driven throughout the continent and, of course, the lack of Ku-band especially in the Middle East and North Africa drives that demand even further. The demand is not so acute in Western Europe but predominantly a problem in the Middle East and throughout the African continent.

Question: For the Middle East and Africa, cellular backhaul is emerging as an important and popular application. Are you finding great demand for modems that support this particular application?

Daniel Enns: I would say that cellular backhaul, banking and oil and gas industries are where the demand lies. Proportionally, the cellular backhaul demand is larger. However, the oil and gas sector is very strong

in the Middle East and Africa.

Question: We are nearing the end of 2008. What does Comtech EF Data have in store for 2009?

Daniel Enns: As you probably are very aware, we acquired Radyne and we are going to be focused in 2009 on enabling our Radyne customers with feature functionality that is equal to Comtech. It is a year in which we will be doing a lot of innovation, adding feature functionality to Radyne modems so that existing customers have an easy way of migrating to higher efficiency on existing platforms.

We will also specifically look at Africa. For example, the World Cup is to take place in South Africa and we will have a focus on video in this particular region. We also now have Comtech TV that is part of the Tiernan Group also looking at the video side as a key business proposition in 2009 for our overall satellite business.

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