

## Q & A for Networks Telecom

**Mr. S. Dua**, Industrial Cables (India) Ltd.

Two questions for Mr. De Boer. From Indian point of view, the deregulation is in a first stage. This year the government announced their policy to further deregulate the Telecom industry, together with the budget. Substantial turmoil was noticed in the prices for fiber, making users i.e. Telecom utilities, susceptible to the stability of optic fiber. Could you please react?

**Mr. Jan Conradi** answers: I don't have the background to comment on the stability of fiber prices, except to say that last year every noted a significant shortage, however today the industry has excess capacity, both in the plants as well as in the ground.

**Mr. Hans de Boer:** Indeed deregulation in India has just started. Let me add that in Europe and even in the US, the process is not completed.

**Mr. Hans Meiring**, Aberdare Cables

A question for Mr. de Boer. For the forecast you have given for global bandwidth demand, do you have you any correlation on how that matches the current capacities in fibers already installed around the globe?

**Mr. Hans de Boer:** Technically speaking, all bandwidth in use today could in theory be transmitted through one single fiber. So from that view point more than enough fiber is in place. However the fibers are not in the right spot and the networks using them are fragmented. To bring the fibers to the right locations, in the right mode, in sufficient capacity will require a lot more fiber than in use today and always the system will be over dimensioned. For the long hauls, perhaps some kind of saturation is reached. For the metro and local networks fiber demand will continue.

**Mr. Ove Alm:** As has been said, location drives the demand. Skanova has fibers all over but we need more to complete the access networks and to reach the right spot at the right time.

**Mr. Jan Conradi:** To me it seems there is a misconception in the industry. More so with the analysts than with the technical people. In any kind of a network there are inefficiencies. The kind of traffic in the networks, including the overheads for network control and signaling between the nodes, all come in bursts. So in practice a shortsighted calculation would learn that average demand is only a few percent of theoretical installed capacity.

**Mr. Jan Cieremans**, ICF: Allow me to make an additional comment, to demonstrate the relatively low impact of fiber compared to the cost of installation. Total cost of installation, including the digging, the duct pipes, the cable pulling (or blowing), the right of way and the licenses all together make up 95% of the bill. Only some 5% are fiber cable. Fiber prices

then in the end users perception cannot be that important; it seems more to be based on publicity than on impact on system cost. Further if an operator has obtained right of way and building licenses etc, he will build for not 6 fibers but for 200, with very little additional cost compared to the total cost of the project. This explains the peak demand for fiber and in the same time it means that utilization will always be low. Please Mr. Alm correct me if I mislead the audience.

**Mr. Ove Alm:** You are quite right. This is actually what we are doing. We choose higher fiber counts for only a small price difference and that brings low utilization in networks close to the customer. Moreover more operators try to build their own network, do the digging etc, some times in parallel for the same big business customer. When in the future WDM becomes available for this level it may change in the sense that it could be more efficient to have many users on one fiber and manage by using wavelength.

**Dr. Peter Gössing,** session chairman expresses thanks to the speakers for their detailed and professional presentations and closes the session.