

Optical access networks

The 20th VITEL Workshop

– an important milestone in organising workshops within the framework of VITEL

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Apart from organising an international symposium on a selected key subject every second year, the Electrotechnical Association of Slovenia organises, within the framework of VITEL, one or two workshops each year on the most relevant topic for Slovenia at the time. The workshops involve experts from Slovenia as well as from other countries in Europe and around the world. The workshops are always well attended. On 5 and 6 November 2007, the 20th workshop was held at our favourite location, Brdo, near Kranj. This important milestone undoubtedly motivated all engaged to continue to organise these kinds of events with even more commitment.

This workshop was organised by:

- the Electrotechnical Association of Slovenia, EZS;
- the Slovenian Communication Society, SIKOM;

- the IEEE Communications Society Chapter of Slovenia;
- the Faculty of Electrical Engineering, University of Ljubljana;
- the Faculty of Electrical Engineering and Computer Science, University of Maribor.

The topic chosen for the 20th workshop was optical access networks and optical access technologies. This area is extremely important now, and will be even more important in the future. General interest in optical access is increasing and gaining new momentum on a global scale. Therefore it was the right moment to address the essentials of these technologies and to discuss them in detail with experts from Slovenia and from abroad. We ought to be fully aware now of the short and long-term influence of optical access networks on the economy as a whole.

Optical access networks are in bits/second by far the most powerful transmission media. Nevertheless, this is not a sufficient argument to decide for optical communications in each and every case. Besides technical arguments, there are also economic, environmental, regulatory and others, all of which influence the decision. The decision taken has to ensure the largest possible positive effect in the given situation. The breadth, the challenging requirements, relevance of the matter and its association with many other areas, requires a comprehensive approach taking into account many different perspectives; this was exactly the intention of the 20th VITEL Workshop on Telecommunications.

The following topics were discussed:

- the situation around the world;
- the situation in the developed countries of Europe;
- the situation in Slovenia;
- available technologies and standards;





Darren Shea, British Telecom

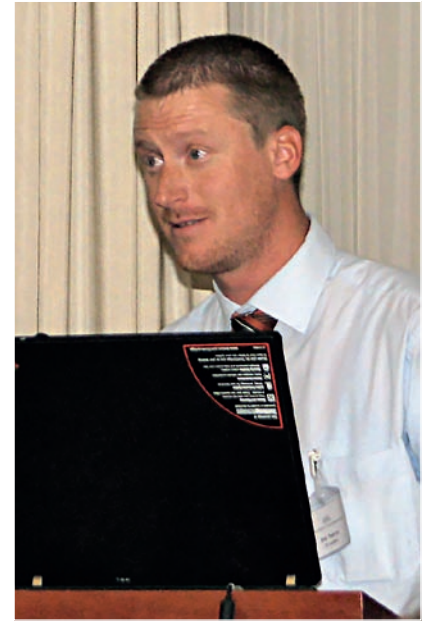
- network architectures;
- forecasting possible development trends.

Different available solutions for optical access were also examined in detail, such as:

- passive and active optical access networks: PON, AON;
- different configurations of optical and hybrid optical – wireline networks: FTTx, PtP, PtMP;
- different standards: APON, BPON, GPON, EPON, GEAPON, WDM PON;
- optical access networks compared to wireline and wireless access networks.

Europe as a whole and Slovenia within Europe are lagging behind the Far East and North America in fast introduction of optical access. Therefore, in June 2007, the FTTH Council Europe challenged its interested parties to increase by 10 times the present number of optical accesses in the next 3 to 5 years, from today's 820,000 to 8 million at the end of 2012.

In addition to experts from Slovenia, the workshop hosted some prominent and influential specialists from other European countries including Joeri Van Bogaert (FTTH Council Europe), Darren Shea (University College London, United Kingdom), Željko Popović (Ericsson Nikola Tesla d.d., Croatia), Thomas Kallstenius (Alcatel-Lucent, Belgium), Dave Stockton (Emtelle UK Ltd., United Kingdom), Jiri Štefl (OPTOCON Co. Ltd., Czech Republic), Jan Dannesfeldt (Dannesfeldt Group, Denmark), Russell Wool-



Blaž Peternel, Mobitel

Joško Budin and Boštjan Batagelj, discussion moderators, FE, University of Ljubljana



sey (Sumitomo Electric Europe Ltd.) and Stephan Brüggén (TRANSMODE Systems AB, Sweden).

The workshop completely fulfilled the expectations of the organisers. It attracted more than 150 professionals, most of them from Slovenia, including network operators, service providers, equipment manufacturers, research and development institutions, regulators, and, last but not least, users.

Katja Mohar Bastar, Slovenian Agency for Post and Electronic Communications