8e UGent - FirW
DOCTORAATSSYMPOSIUM

woensdag 5 december 2007 | 14h00 | Het Pand | Onderbergen 1 | 9000 Gent
Architecture

052 Modern at Expo 58: Polyphonic discussions in post-war architecture
Rika Devos

053 The Architecture of Monographic Museums
Maarten Liefgooghe

054 Scandinavian architecture and design influences on Belgian architects (1930-1970)
Irene Lund

055 Landscape discourses and iconography (1890-1940)
Bruno Notteboom

056 Focus on housing demands in spatial planning
Ann Pisman

057 The Analogous Spaces of Paul Otlet (1868-1944): The spatial convergence of informational, social and urban networks
Wouter Van Acker

058 The Topology / the Topology of the school
Maarten Van Den Driessche

Applied Physics

059 Molecular environment and temperature dependence of first principles EPR parameters
Reinout Declerck, Ewald Pauwels and Veronique Van Speybroeck

060 Normal modes in partially optimized molecular systems
An Ghysels

061 Glass-Metal Joining in Nuclear Environment: The State of the Art
Marijke Jacobs and Brichard J. Linke

062 Electrochromic materials for electronic paper
Matthias Marescaux, Filip Beunis and Filip Strubbe

063 Fast Multipole Techniques For The Simulation Of Very Large Three Dimensional Electromagnetic Scattering Problems
Joris Peeters

064 New Methods in Force-Field Development
Toon Verstraelen and Veronique Van Speybroeck
Study on a next generation 10 Gb/s Long Reach DWDM Passive Optical Network
Cedric Mélange, Bart Baekelandt, Johan Bauwelinc and Xing-Zhi Qiu
Supervisor(s): Jan Vandewege

In this paper a very promising optical network is presented, which can offer high bandwidth access to the residential customer at possible low cost. The speed is increased from the current 1.25 Gb/s Gigabit Passive Optical Network to 10 Gb/s bidirectional, the reach is extended from 20 km to 100 km and the number of users served is raised from 64 up to 16384 (512 users per wavelength, 32 wavelengths). In this way the metro and access networks can be converged into a single, future-proof, cost-effective network architecture. The doctoral research performed at INTEC-design concerns the study of the optical components that are needed to enable this new technology. Optical phenomena like Amplified Spontaneous Emission noise, dispersion, optical filtering, gain compression and chirp are carefully modeled and their implications on the design of the 10 Gb/s Burst-Mode electronics are derived.