ITU-T The leader in DWDM

DWDM means

Recommendations

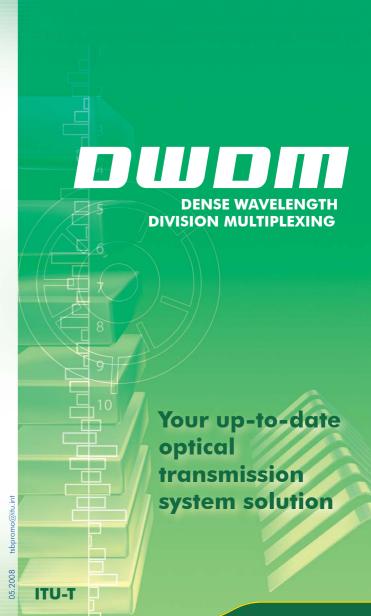
- **G.694.1** "Spectral grids for WDM applications: DWDM frequency grid" specifies a frequency grid which supports a variety of DWDM channel spacings ranging from 12.5 GHz to 100 GHz (and wider)
- **G.696.1** "Longitudinally compatible intra-domain DWDM applications" specifies long-haul DWDM systems primarily intended for backbone applications
- **G.698.1** "Multichannel DWDM applications with single channel optical interfaces" specifies DWDM systems primarily intended for metro applications with channel bit rates up to 10 Gbit/s
- **G.698.2** "Amplified multichannel DWDM applications with single channel optical interfaces" specifies DWDM systems primarily intended for core metro/regional applications that include line optical amplifiers with channel bit rates up to 10 Gbit/s
- **G.959.1** "Optical transport networks physical layer interfaces" specifies DWDM optical systems with 32 channels for different bit rate classes up to 10 Gbit/s
- **G.973** "Characteristics of repeaterless optical fibre submarine cable systems" deals with submarine DWDM systems without line optical amplifiers
- **G.977** "Characteristics of optically amplified optical fibre submarine cable systems" deals with submarine DWDM systems with line optical amplifiers

- Cost-effective applications, through the use of a great number of optical channels on a single optical fibre pair
- Granularity in the capacity with the possibility of adding new optical channels, also operating at different bit rates, to the same optical fibre pair, as additional capacity is required
- Modularity in the reach of the systems, with possible link length from a few to more than one thousand kilometres
- Flexibility in link configuration [linear, ring with or without optical add drop multiplexing (OADM)]

For more information on activities related to optical transmission Recommendations, please check the ITU-T Study Group 15 website at:

www.itu.int/ITU-T/com15

For more information on other ITU-T activities: workshops: www.itu.int/ITU-T/worksem/e-flash and news: www.itu.int/ITU-T/news/membership: www.itu.int/ITU-T/membership/technology watch: www.itu.int/ITU-T/techwatch





Highlights

- 100 GHz, 50 GHz, 25 GHz channel spacing (G.694.1)
- Unidirectional
- Up to forty 10 Gbit/s optical channels 100 GHz spaced per DWDM system, in C-band
- G.652, G.653, G.655 optical fibre-supported

- Multichannel (DWDM) interfaces (G.959.1)
- Multivendor interoperability: Vendor A Mux/Demux can be connected to Vendor B Mux/Demux.

- Single channel (coloured) interfaces (G.698.1, G.698.2)
- Multivendor interoperability:
 Vendor A transceiver can be connected through
 Vendor B Mux/Demux to Vendor C transceiver

