ITU-T The leader in optical systems standardization

Optical interfaces for optical systems

G.691 Optical interfaces for single-channel STM-64 and other SDH systems with optical amplifiers specifies optical systems at bit rates from 622 Mbit/s to 10 Gbit/s

G.693 Optical interfaces for intra-office applications specifies single-channel optical systems at bit rates of 10 Gbit/s and 40 Gbit/s, with and without a photonic cross-connect in the optical path

G.957 Optical interfaces for equipment and systems relating to the synchronous digital hierarchy specifies single-channel systems without optical amplifiers at bit rates from 155 Mbit/s to 2.5 Gbit/s

G.959.1 Optical transport networks physical layer interfaces specifies single-channel and DWDM optical systems with 16 channels for different bit rate classes up to 43 Gbit/s

G.695 Optical interfaces for coarse wavelength division multiplexing applications specifies CWDM systems with up to 12 channels with bit rates up to 2.5 Gbit/s

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 metro applications which include optical amplifiers with channel bit rates up to 10 Gbit/s

Spectral grids for WDM

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.694.2 Spectral grids for WDM applications: CWDM wavelength grid specifies a CWDM grid with channel spacing of 20 nm

Optical safety aspects

G.664 Optical safety procedures and requirements for optical transport systems provides guidelines and requirements to provide optically safe working conditions for equipment in restricted and controlled locations

Submarine optical systems

G.973, G.977 (repeaterless and optically amplified submarine cable systems) specify the guidelines for the characteristics and performances of systems, amplifiers, cables and branching units

ITU-T Recommendations on optical transmission enable:

- support for the transport of all the types of signals (voice, data, video), protocols (FR, ATM, SDH, IP, etc.) and services
- a Quality of Service in accordance with the end-to-end performance objectives recommended, for example, in G.826 and in G.829
- the possibility of choosing the most appropriate optical system for a given bit rate, fibre type, length of link, channel count, type of installation (terrestrial, submarine)
- the flexibility of using, in most cases, terminal equipment from different manufacturers in the same system, providing operational and economic advantages

For more information on optical transmission Recommendation related activities, please check the ITU-T Study Group 15 website at:
www.itu.int/ITU-T/com15

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

OTS

OPTICAL TRANSMISSION SYSTEMS

Your up-to-date optical transmission systems solutions

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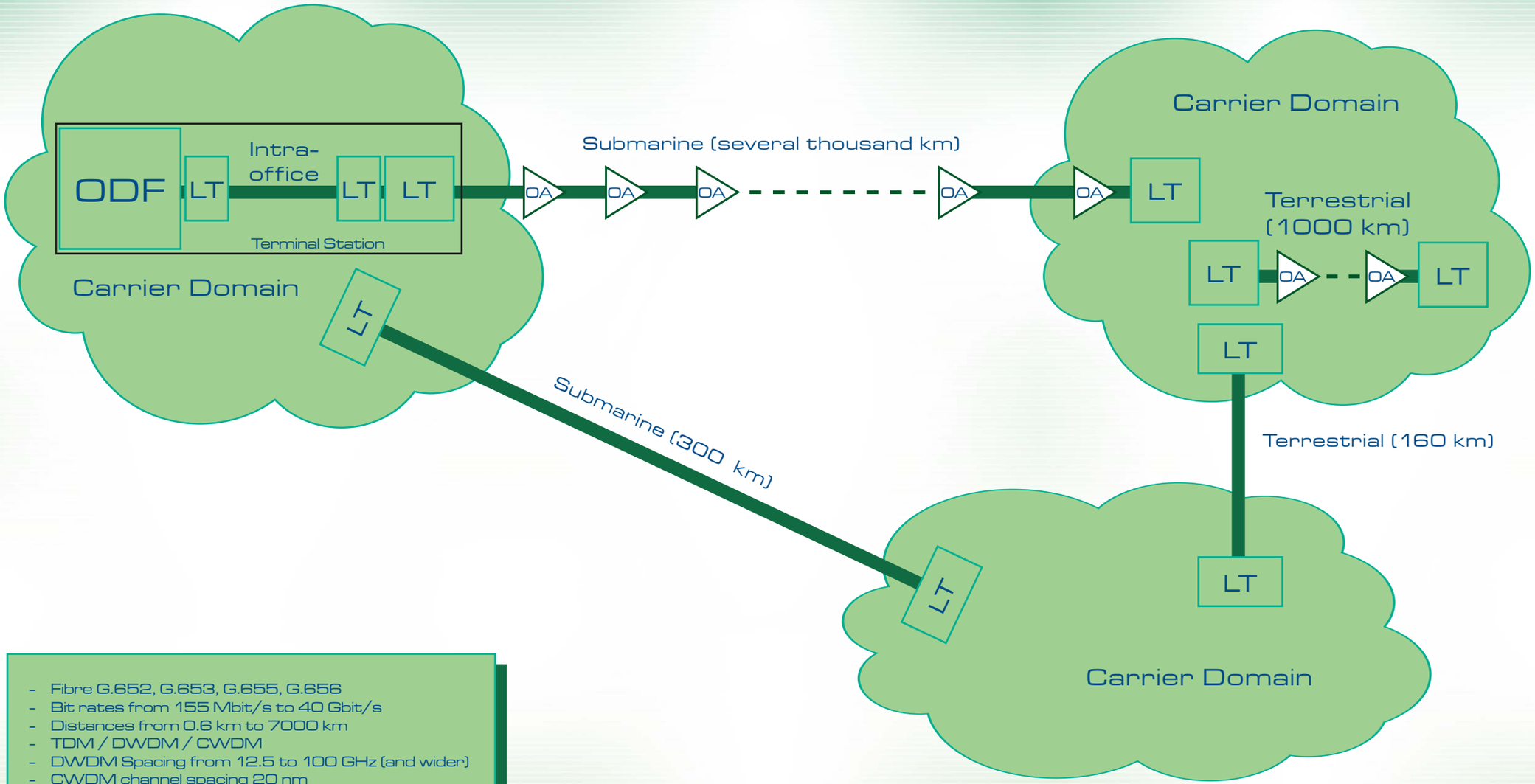
International Telecommunication Union



- Fibre G.652, G.653, G.655, G.656
- Bit rates from 155 Mbit/s to 40 Gbit/s
- Distances from 0.6 km to 7000 km
- TDM / DWDM / CWDM
- DWDM Spacing from 12.5 to 100 GHz (and wider)
- CWDM channel spacing 20 nm

OA	Optical Amplifier	LT	Line Terminal equipment
DWDM	Dense WDM	ODF	Optical Distribution Frame
CWDM	Coarse WDM		