

ITU-T

The leader in optical systems standardization

Optical interfaces

G.691 – “Optical interfaces for single-channel STM-64, STM-256 and other SDH systems with optical amplifiers” specifies optical systems at bit rates from 622 Mbit/s to 10 Gbit/s

G.692 – “Optical interfaces for multichannel systems with optical amplifiers” describes characteristics of systems with bit rates up to 2.5 Gbit/s

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

G.957 – “Optical interfaces for equipments and systems relating to the synchronous digital hierarchy” specifies single-channel systems at bit rates from 155 Mbit/s to 2.5 Gbit/s

G.959.1 – “Optical transport network physical layer interfaces” specifies single-channel and up to 16 channels optical systems for different bit rate classes up to 10 Gbit/s

Spectral grids

G.694.1 – “Spectral grids for WDM applications: DWDM frequency grid” specifies a frequency grid which supports a variety of DWDM channel spacing ranging from 12.5 GHz to 100 GHz (and wider)

G.694.2 – “Spectral grids for WDM applications: CWDM wavelength grid” specifies a CWDM channel spacing of 20 nm

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

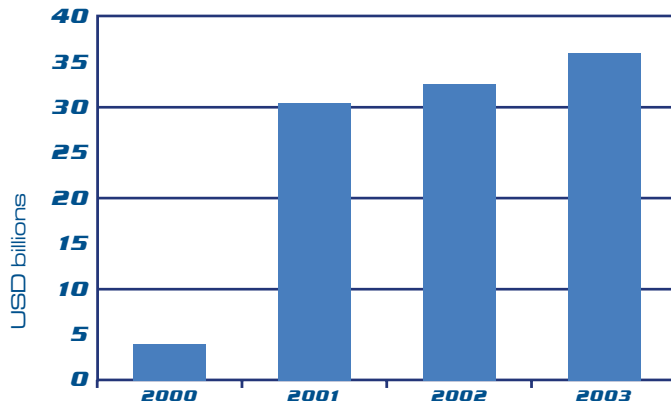
G.973, G.977 – specify the guidelines for the definition of systems, amplifiers, cables and branching units characteristics and performances of repeaterless and optically amplified submarine cable systems

ITU-T

Recs 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 e.g. 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 the 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 economical advantages

Worldwide optical transmission revenue (Total)



Source: Gartner Dataquest Worldwide Optical Transmission Systems Market Share and Forecast, 1996-2005

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

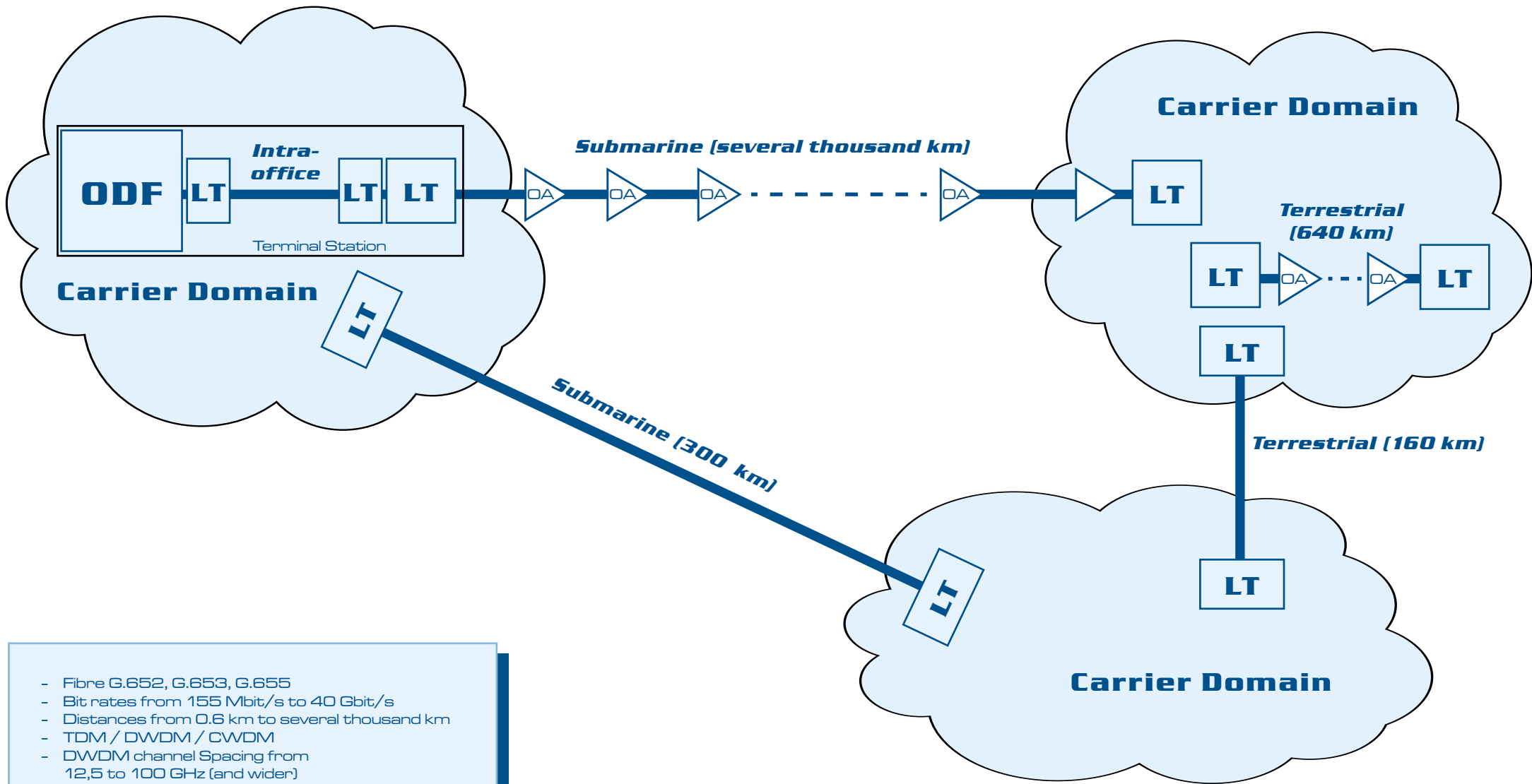


OTS

Optical Transmission Systems

Your up-to-date
optical
transmission
systems
solutions

Optical Transmission Systems



- Fibre G.652, G.653, G.655
- Bit rates from 155 Mbit/s to 40 Gbit/s
- Distances from 0.6 km to several thousand km
- TDM / DWDM / CWDM
- DWDM channel Spacing from 12,5 to 100 GHz (and wider)
- CWDM channel spacing 20 nm
- Only unregenerated distances are quoted

OA Optical Amplifier
 DWDM Dense WDM
 CWDM Coarse WDM

LT Line Terminal equipment
 ODF Optical Distribution Frame