Flexible OTN (FlexO) Long-Reach Interfaces

G.709.3 and G.709.6

Recommendation G.709.3 *Flexible OTN B100G long-reach interfaces*

- Uses the common FlexO elements from G.709.1 to define a set of multi-vendor interoperable long-reach interfaces
- Supports OTN signals at 100G, 200G and 400G.
- Defines two FEC codes with higher coding gains for long-reach applications (e.g., OFEC) deployed over coherent DWDM interfaces with QPSK or 16QAM constellations.

Recommendation G.709.6 *Flexible OTN B400G long-reach interfaces*

- Uses the common FlexO elements from G.709.1 and the OFEC structures defined in G.709.3 to define a set of coherent DWDM multi-vendor interoperable interfaces deployed over QPSK and 16QAM constellations with higher bauds.
- Supports OTN signals at 400G and 800G.
- Supports Ethernet optimized FlexO interfaces with lower data rates enabled by direct mapping of Ethernet clients up to 800GE.
- Bonding of FlexO-x(e)-<int>-m is supported, allowing a higher rate client to be transported over multiple, homogenous, lower rate optical interfaces. For example, an 800G client can be carried over a FlexO-4-<int>-2 interface group, where <int> defines the FEC and modulation type, e.g., FlexO-4-DO-QPSK-2.
- FlexO-x(e)-<int>-m long-reach interfaces are used for example:
  - Within the Metro and Core Networks.
  - Handoff between Metro and Core networks.
  - Router-to-core network handoff (for distances beyond those supported by G.709.5 short-reach interfaces).
  - Other applications include, for example, direct router-to-router interconnection.

Some of the network applications are illustrated in the figure below.

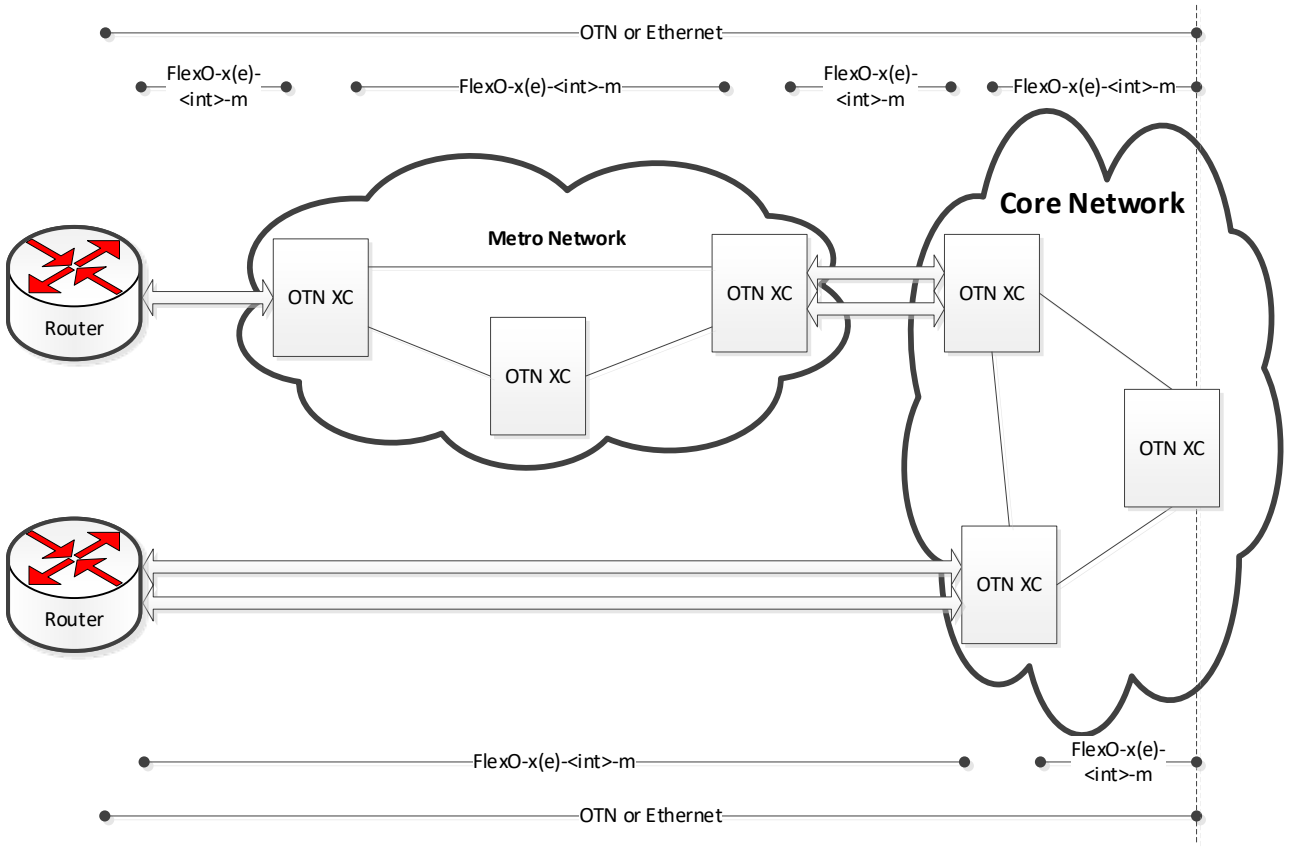

Figure – Example FlexO-x(e)-<int>-m network deployments