Flexible OTN (FlexO) Common Elements
G.709.1 – Information Structures

Recommendation G.709.1 *Flexible OTN common elements*

- Specifies common elements and signal structures used by various types of FlexO interfaces, for single vendor applications and multi-vendor interoperable interfaces as defined in G.709.3, G.709.5 and G.709.6.

- Defines the frame, payload, alignment mechanism, interleaving, group management, mapping procedures and overhead (basic and extended).
- Group management allows bonding multiple lower rate interfaces to carry a higher rate client.
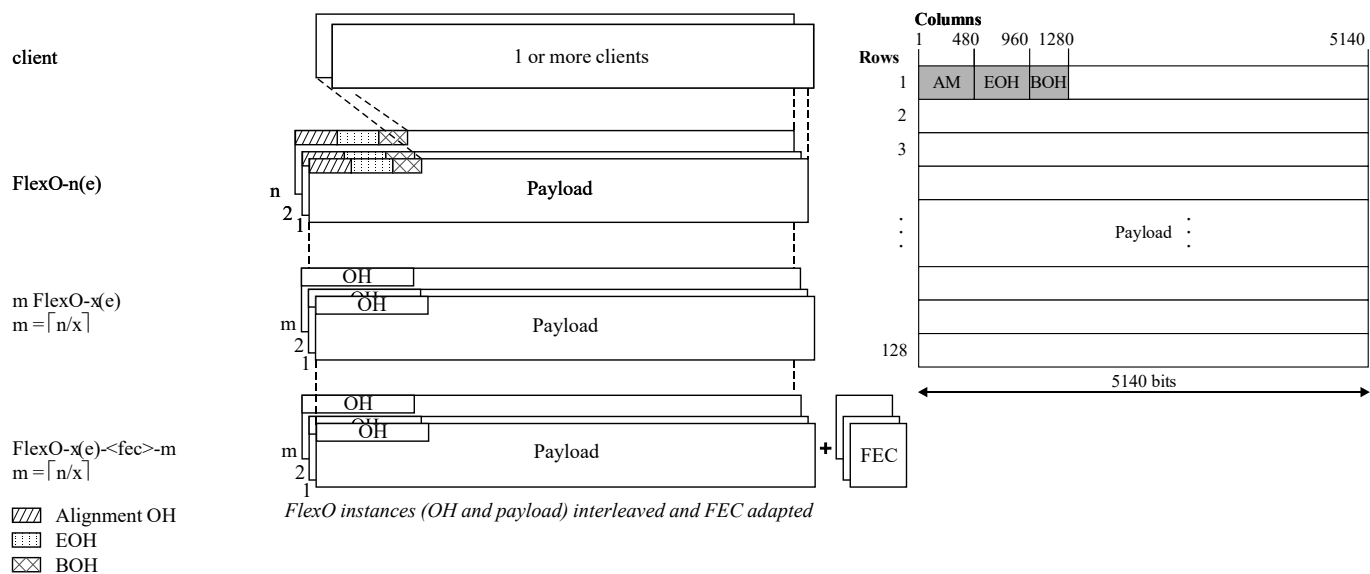
Figure 1 illustrates the frame format.

Figure 1 – FlexO information structure

FlexO provides overhead for various OAM (operation, administration and maintenance) functions including, status, management of interface group bonding, in-band communication channels, and timing transfer.

Two mapping procedures are defined for adapting client signals to the FlexO payload.

- Bit-synchronous mapping (BMP) is used to map a single OTN client to a FlexO-n.
- Asynchronous generic mapping (GMP) is used to map multiple clients to a FlexO group.
  - Multiple OTN clients to a FlexO-n.
  - Multiple Ethernet clients to a FlexO-ne.
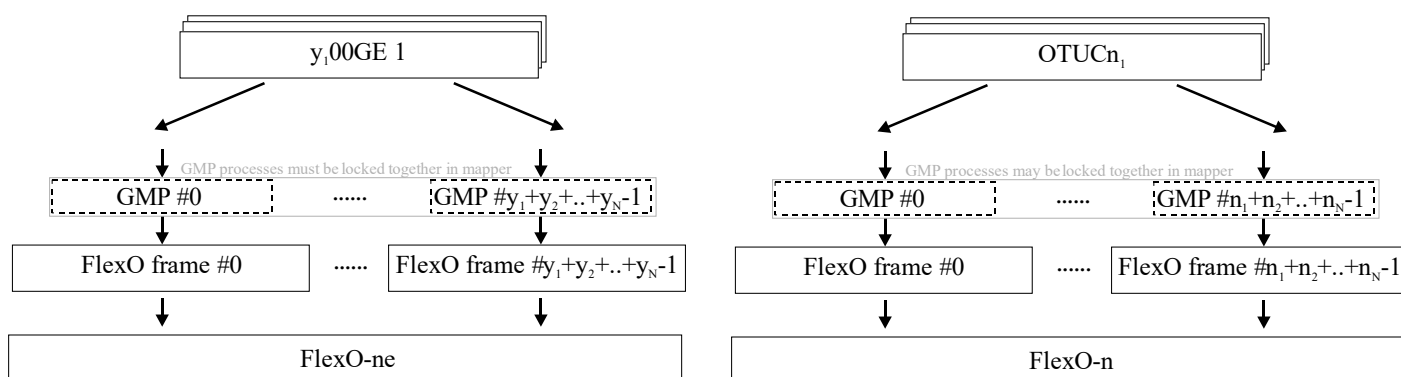
Figure 2 illustrates the asynchronous mapping.

Figure 2 – Mapping multiple clients in FlexO-n(e)