Open Fiber Distribution Hub (FDH)

OCP Telco Engineering Workshop 05.14.2018

Earl Pope
Principal – System Architect
AT&T
Timeline

- The Open Fiber Distribution Hub concept was introduced to the community at the OCP Telco Engineering Workshop in Dallas on 9/25/2017.
- The first draft of the Specification was shared with the community on 12/7/2017.
- The Specification was revised with input from the community and the final draft was shared with the community on 4/6/2018.
- The Specification Checklist was presented to the Incubation Committee on 4/19/2018.
Major Features

- The Fiber Distribution Hub (FDH) is an Outside Plant cabinet deployed for Passive Optical Networks (PON).
  - Interface Point between the Feeder Fibers from the Telco Central Office (CO) and the Distribution Fibers placed in the neighborhood.
  - Houses the Optical Splitters
  - Provides Fiber Management
  - FDH Sizes
    - 864
    - 432
    - 288
  - Mounts
    - Pad
    - Pole
    - Rack

<table>
<thead>
<tr>
<th>FDH Size</th>
<th>F2 Terminations</th>
<th>F1 Terminations</th>
<th>Storage Capacity</th>
<th>Splitter Module Shelves</th>
</tr>
</thead>
<tbody>
<tr>
<td>864</td>
<td>864</td>
<td>288</td>
<td>144</td>
<td>3</td>
</tr>
<tr>
<td>432</td>
<td>432</td>
<td>144</td>
<td>144</td>
<td>2</td>
</tr>
<tr>
<td>288</td>
<td>288</td>
<td>72</td>
<td>144</td>
<td>1</td>
</tr>
</tbody>
</table>
Building Blocks – Cabinet

- Grounding
- Withstand 150 mph
- GR-3125
- GR-2898
- GR-487
- GR-63
- GR-326
- GR-1209
- GR-1221
Building Blocks – Fiber Termination Panels

- SC/APC (Angle Polish Connector)
  - GR-3125
  - GR-2898
  - GR-487
  - GR-63
  - GR-449
  - GR-3123
  - GR-326
  - GR-1209
  - GR-1221

https://www.seeclearfield.com/products/category/panels.html
Building Blocks – Splitter Module

- LGX 118 mm Form Factor
- Wavelength bandpass
- Insertion loss
- Uniformity
- Directivity
- Return Loss
- Polarization Dependent Loss

https://www.corning.com/content/dam/corning/microsites/coc/oem/documents/CAH-105_AEN.pdf
Building Blocks – Splitter Module

- “Box” Type Splitter Modules can be used with an adaptor

"Box" Splitter Module + LGX Adaptor = Method to use “Box” Splitters
Next Steps

- Clearfield providing AT&T Open FDH for evaluation
  - New cabinet design to add 19” rails
  - Existing Clearfield Products
    - Fiber panels
    - “Box” Splitters with adaptors
  - Interoperability / Interchangeability Proof of Concept
    - Add LGX Form Factor Splitter Modules provided by other suppliers