Link Segment Configuration Proposal for Testing

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IEEE 802.3 Multi-Gig Automotive Ethernet PHY Task Force
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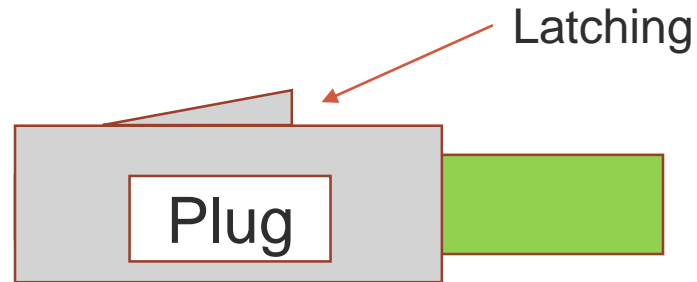# A proposal for Link Segment Configuration

- Why the need for common configuration

- Link Segment Elements / Definition

- Proposed Testable Link Segment Configuration

- Segment considerations and configuration options

# Why the need for a "Standard Link Segment Configuration"

- The following points suggest it useful to have a common Link Segment Configuration.

  1. Silicon Manufacturers are asking to have more short links biased to the near end of the silicon under test.

  2. Cable and Connector manufacturers have endless configuration requests coming from many different sources.

  3. Having a universal configuration provides consistent and fewer variables in the interpretation of the measured test data.

  4. A set of configurable link types will ease the request and manufacturing process to deliver when needed. "Testable Cable Link Set"

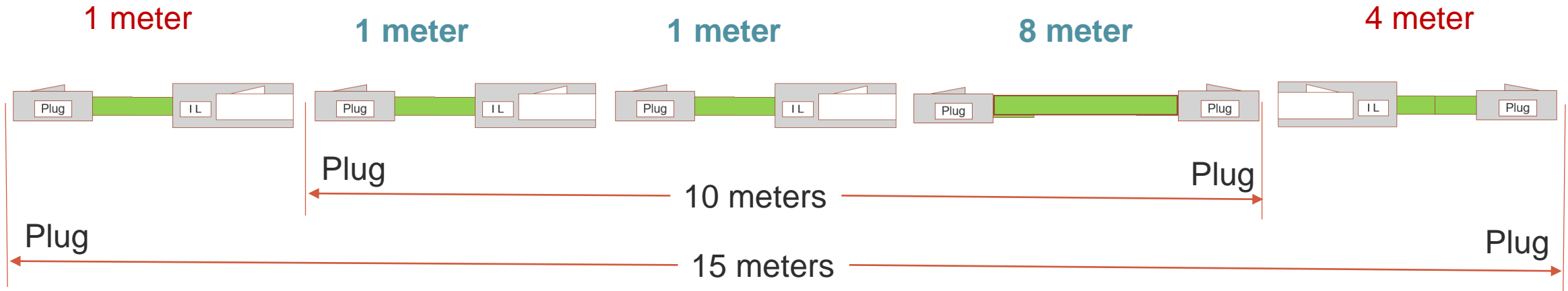# Link Segment Elements / Definition (Illustrations)

- Plug

Latching

Plug

- In-Line

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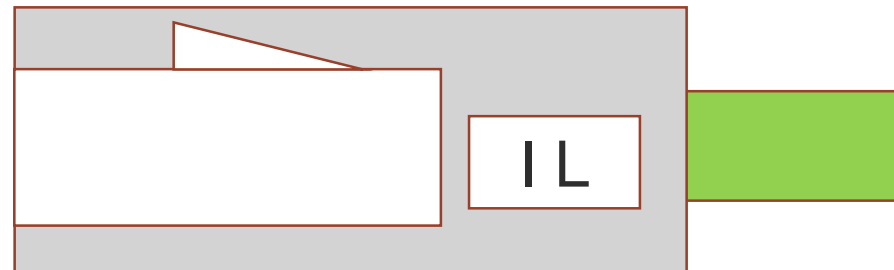
Proposed Testable Link Segment Configuration

"Testable Cable Link Set"

- All testable Link Segments must end with a Plug at each end.

- Producing the least combinations of cable types call for (1 meter x 4), (8 meter x 1) and (4 meter x 1).

- Using the 8 meter as a Plug to Plug provides that transition for both a 10 & 15 meter testable link.

- Testable Links combinations of: 8, 9, 10, 11, 12, 13, 14 and 15 meters are possible with varying In-Line connections ranging from '0' to '4' in number are possible.

- Adding one additional 1 meter Plug to Plug would enable additional Testable Link combinations of: 2, 3, 4, 5, 6, 7 meters.
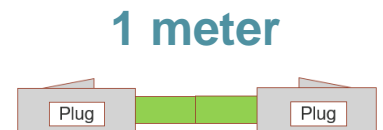
Proposed Testable Link Segment Configuration

(X) Alternative

1 meter	1 meter	1 meter	8 meter	4 meter	1 meter	Total Segment Length	In-Lines
					X	1	0
	X				X	2	1
	X	X			X	3	2
X	X	X			X	4	3
				X	X	5	1
	X			X	X	6	2
	X	X		X	X	7	3
(X)	(X)	(X)	X	(X)	(X)	8	0 (4)
	X		X			9	1
	X	X	X			10	2
X	X	X	X			11	3
			X	X		12	1
	X		X	X		13	2
	X	X	X	X		14	3
X	X	X	X	X		15	4

Thank You!
Questions?