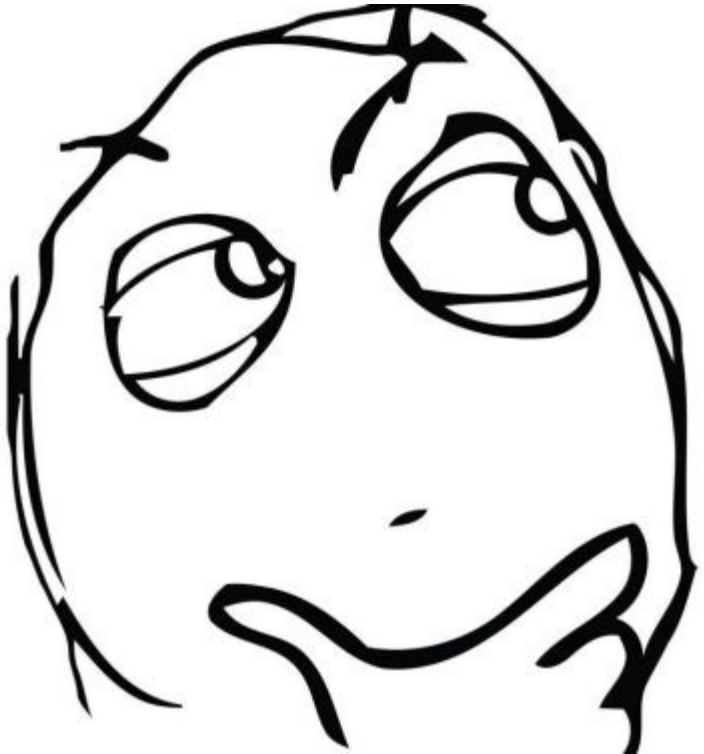
The Good, the Bad, and the Ugly

Open Specifications - why brilliant ideas don't always work out as expected.

Axel Kern (LAWO)

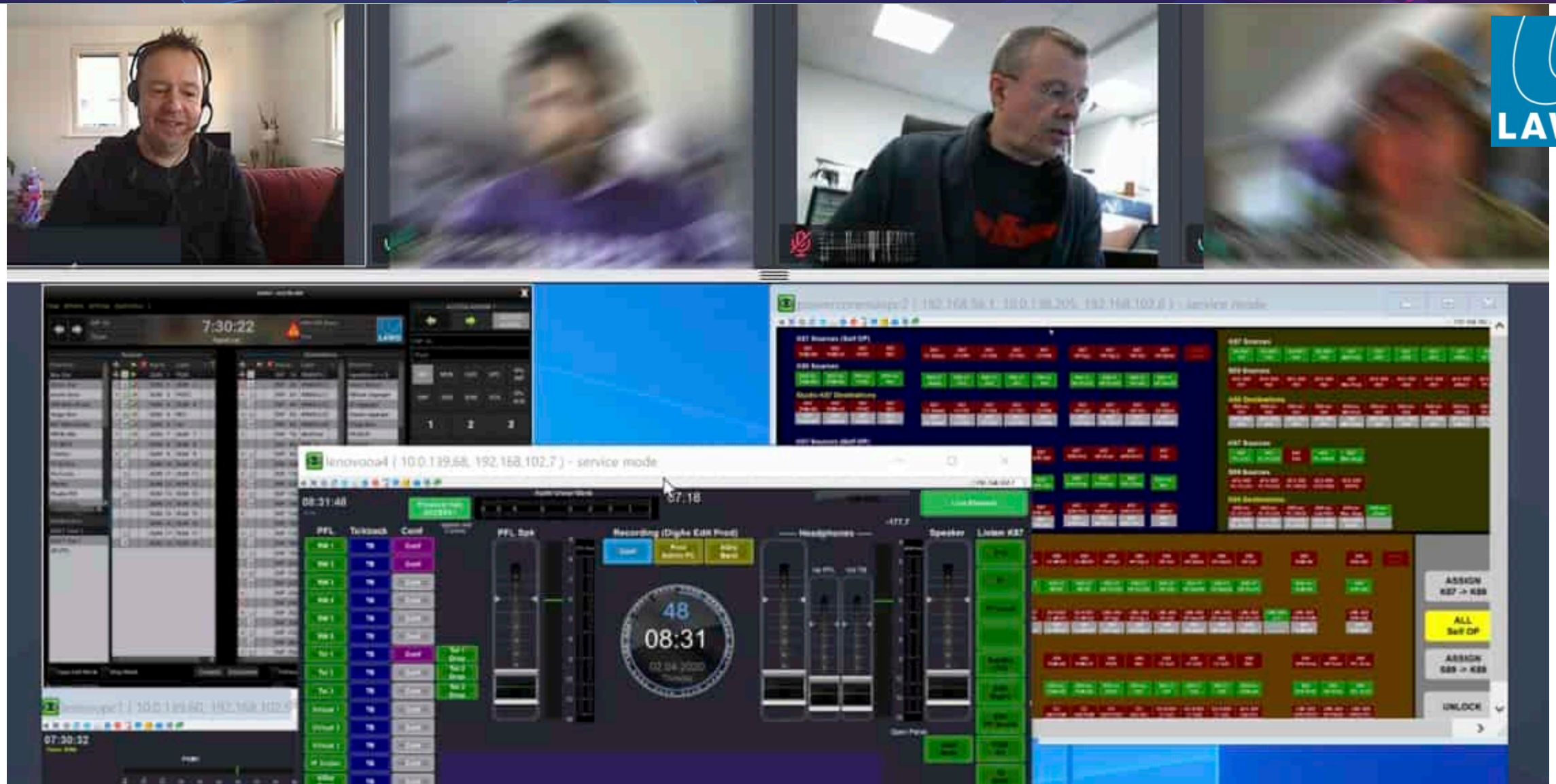
IP SHOWCASE

Audio Engineering Society · AIMS Alliance for IP Media Solutions · AMWA Networked Media. Working. · EBU · SMPTE · VSF Video Services Forum



The Good, the Bad, the Ugly…?

The Good – Open Specifications



What‘s this all about?

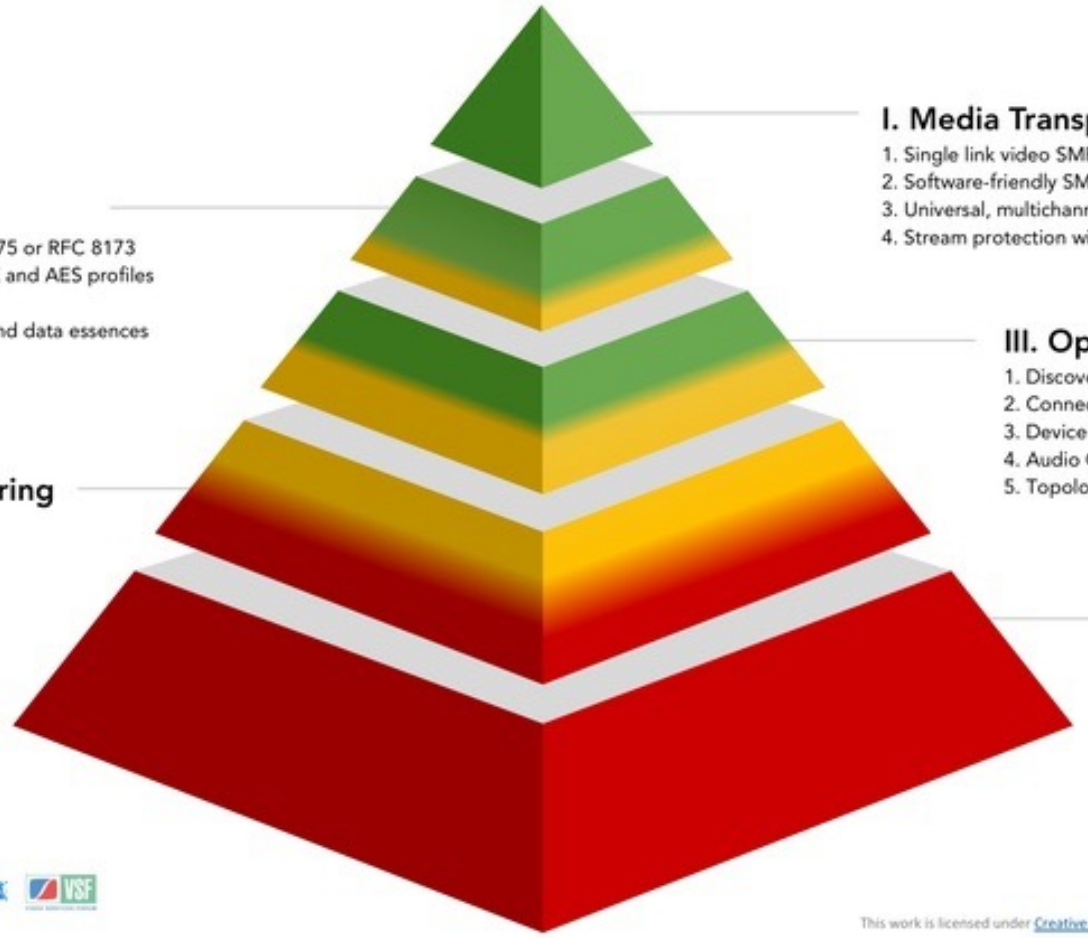
THE TECHNOLOGY PYRAMID FOR MEDIA NODES

Minimum User Requirements to Build and Manage an IP-Based Media Facility using Open Standards & Specifications.

EBU

Tech 3371 Version 2 - 2020

tech.ebu.ch/pyramid



I. Media Transport

1. Single link video SMPTE ST 2110-20
2. Software-friendly SMPTE ST 2110-21 Wide video receivers
3. Universal, multichannel and low latency audio SMPTE ST 2110-30 Level B
4. Stream protection with SMPTE ST 2022-7:2018

II. Time and Sync

1. PTP monitoring with IETF RFC 8575 or RFC 8173
2. PTPv2 configurable within SMPTE and AES profiles
3. Multi-interface PTP redundancy
4. Synchronisation of audio, video and data essences

III. Operational Control

1. Discovery and Registration: AMWA IS-04, BCP-002
2. Connection Management: AMWA IS-05
3. Device Control: Open Methods and AMWA IS-07
4. Audio Channel Mapping: AMWA IS-08
5. Topology discovery: LLDP

IV. Configuration and Monitoring

1. IP assignment and low-level configuration: DHCP, AMWA IS-09
2. Open configuration management
   – e.g. YANG / OpenConfig, Open API, SSH ...
3. Open monitoring protocols
   – e.g. YANG / OpenConfig, MQTT, Syslog, SNMPv3, ...

V. Security

1. EBU R 148 Security Tests
2. EBU R 143 Security Safeguards
3. Secure HTTPS API calls: AMWA BCP-003

Endorsed by:

Widely available

Partially available

Rarely available

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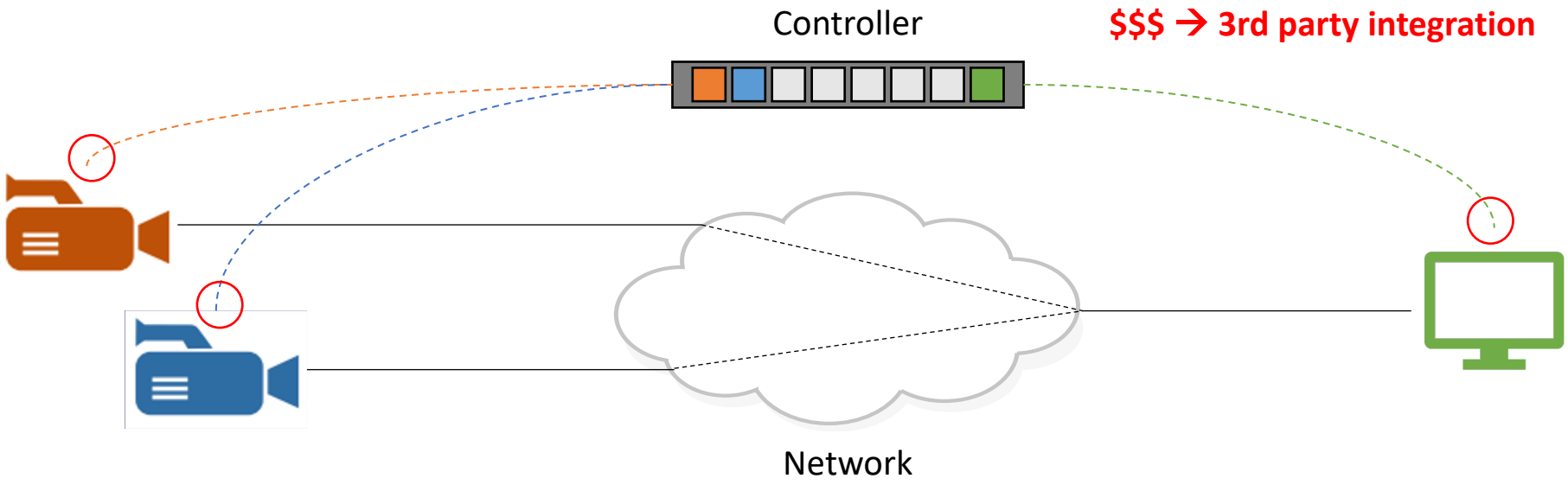
The Good – Open Specifications

Example: NMOS Operational Control

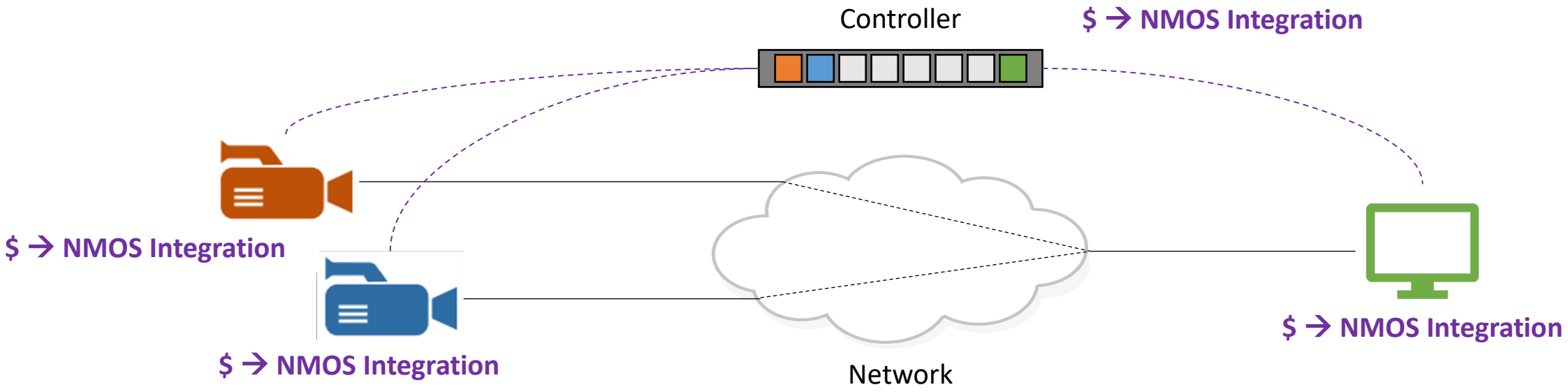
- The traditional situation in broadcast control



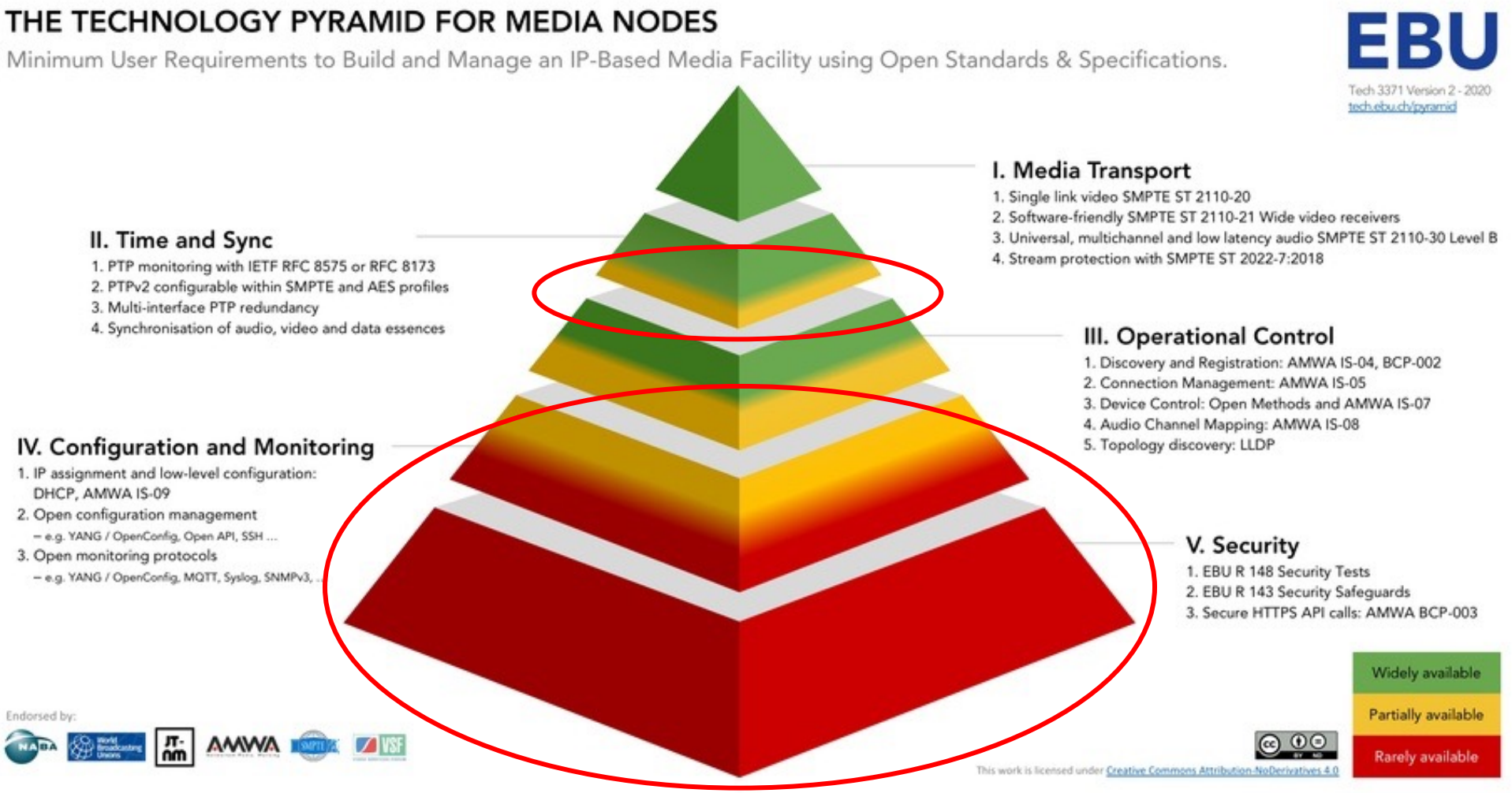
The Good – Open Specifications

Example: NMOS Operational Control

- Since 3-4 Years: No project tender without NMOS requirement
- Good reasons:



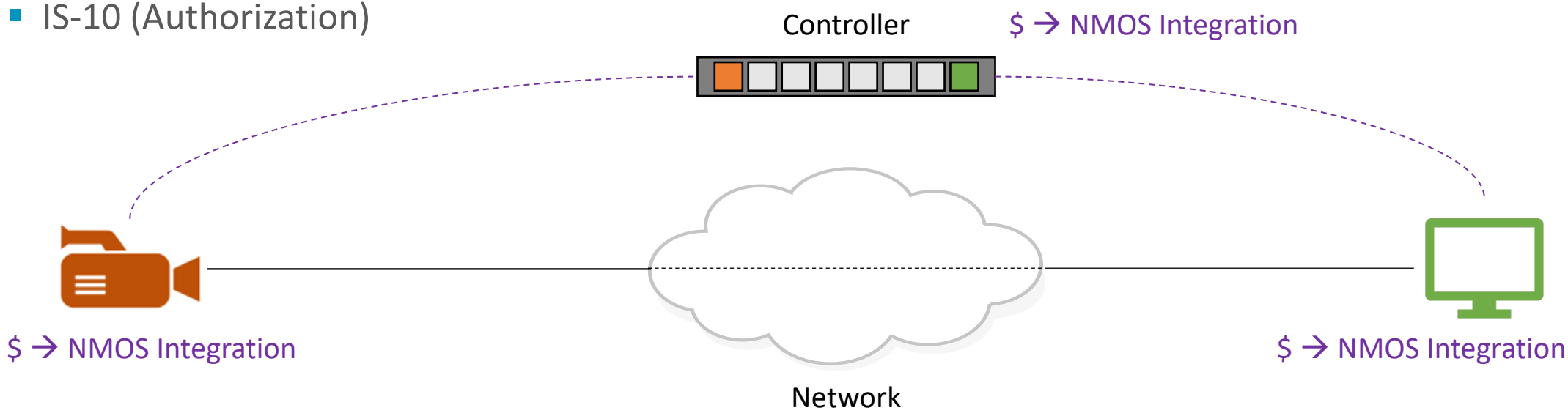
The Bad – Lack of integration



The Good – Broad integration

- **IS-04 (Registration & Discovery)*** ✓
- **IS-05 (Connection Management)*** ✓
- IS-07 (Event & Tally)
- **IS-08 (Audio Channel Mapping)***
- IS-09 (System Parameters)
- IS-10 (Authorization)

***stable** (amwa.tv/nmos Apr2022)



The Bad – Lack of integration

- **IS-04 (Registration & Discovery)*** ✓
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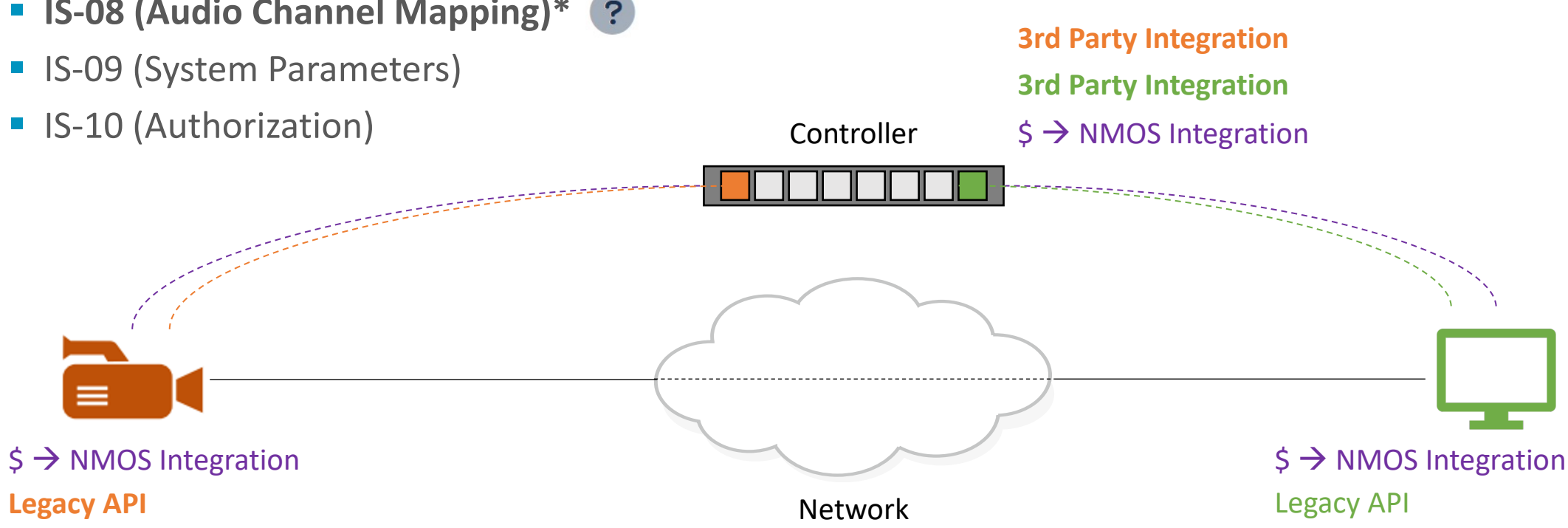

The Bad – Lack of integration

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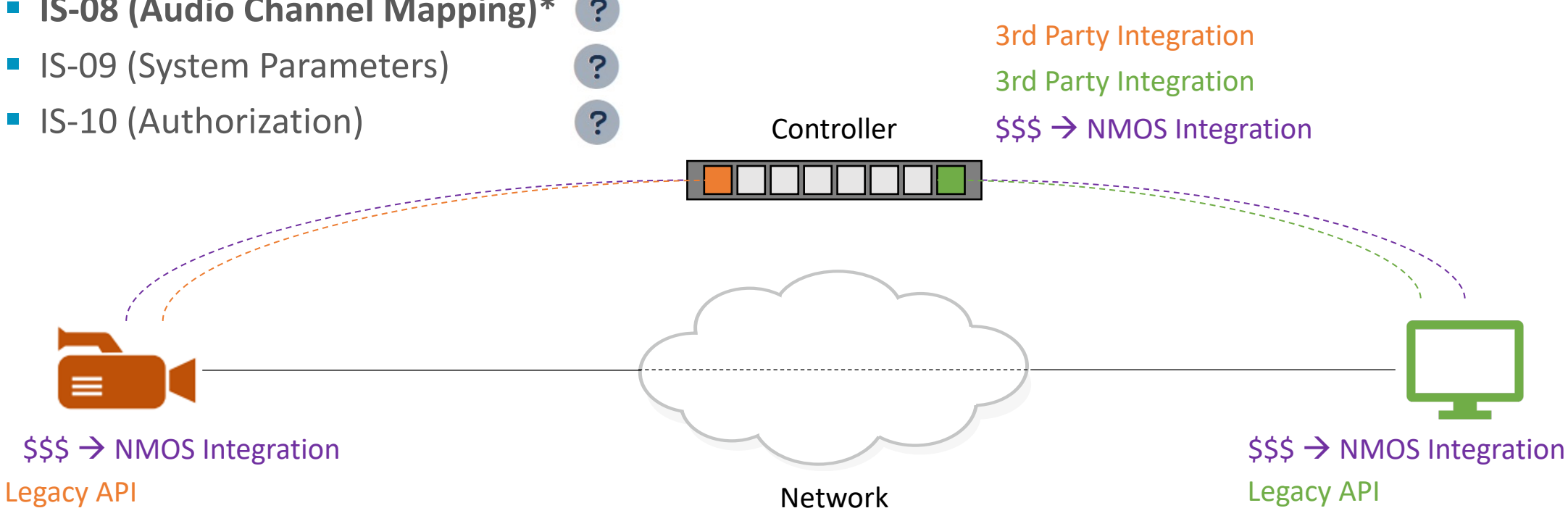
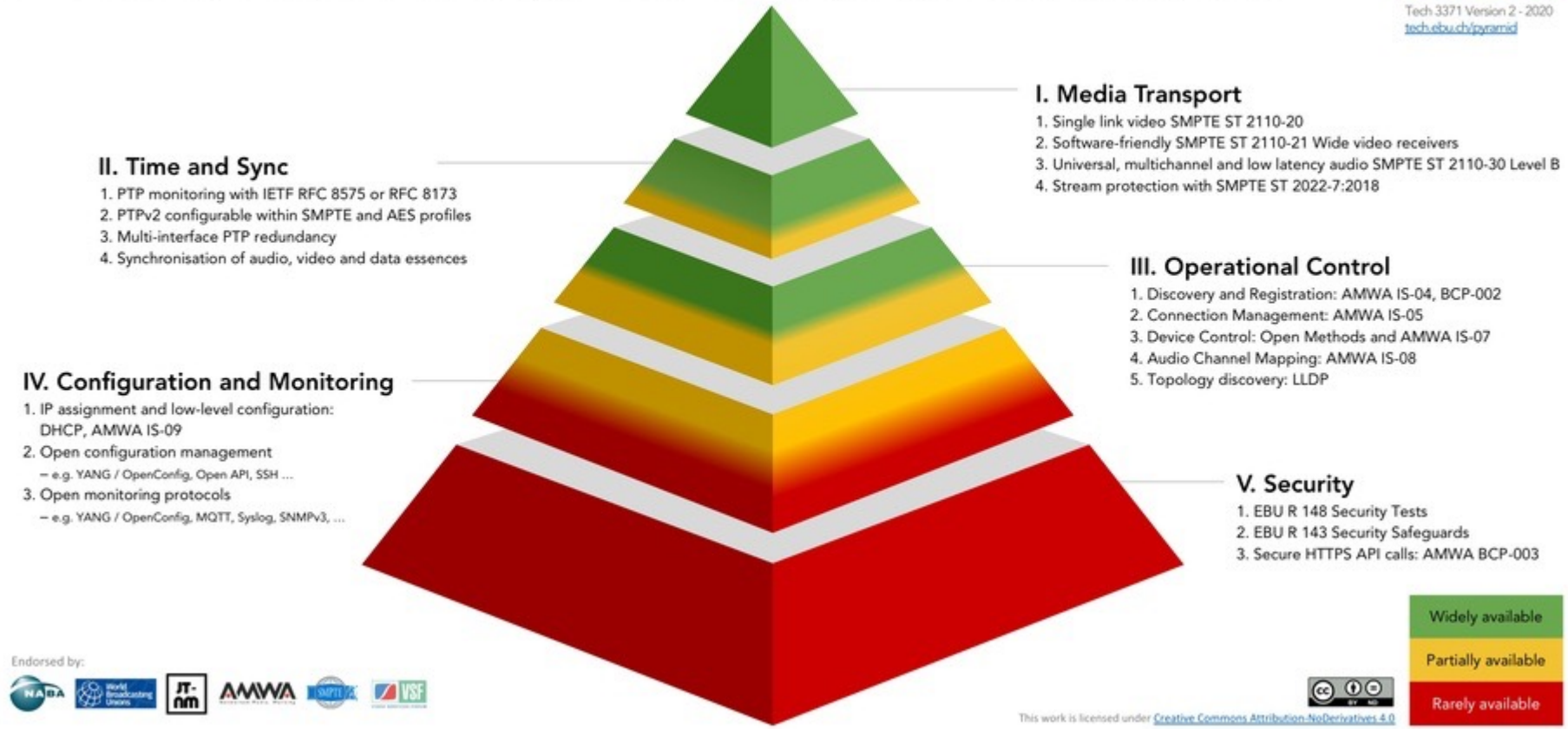


Reality Check



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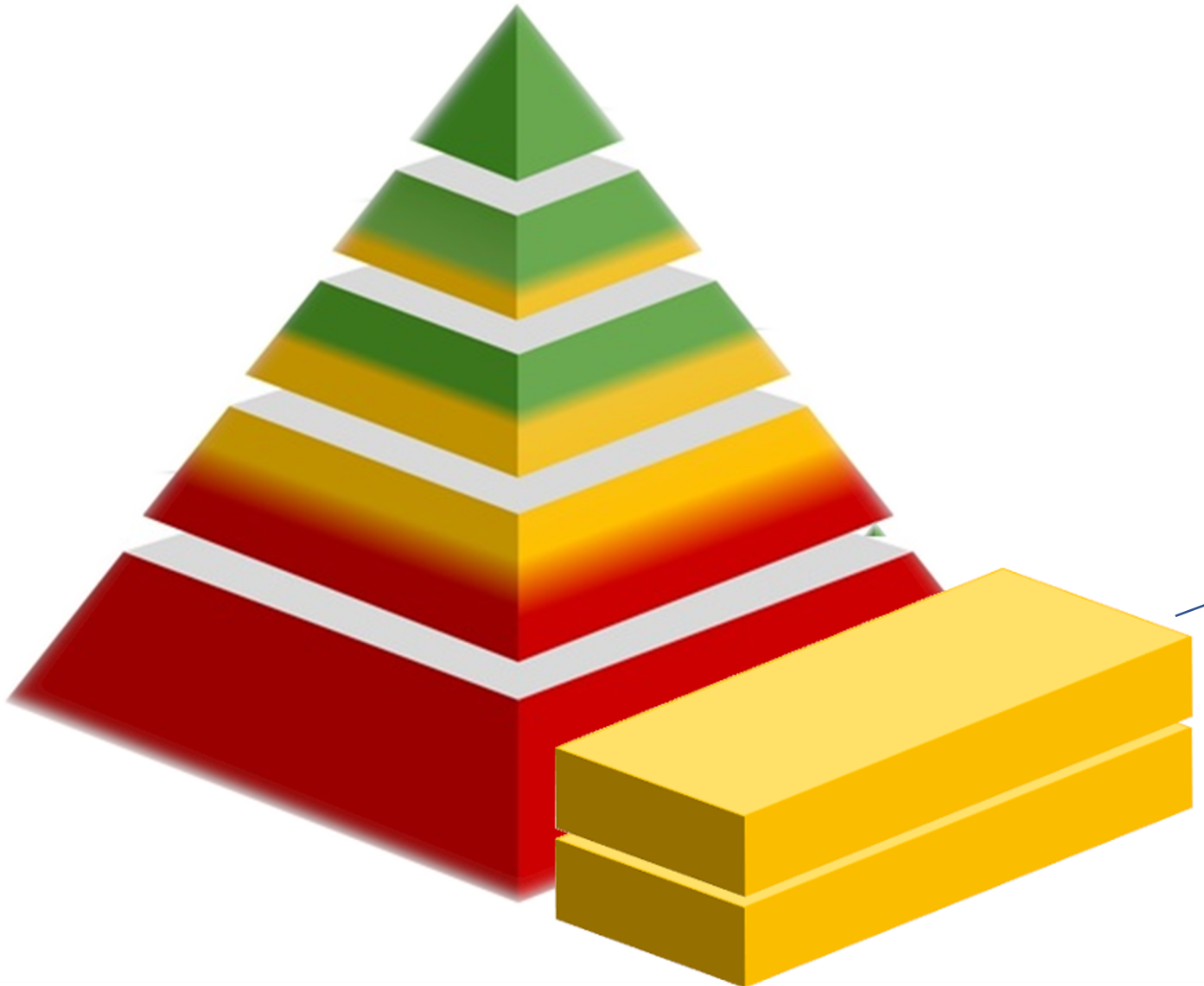
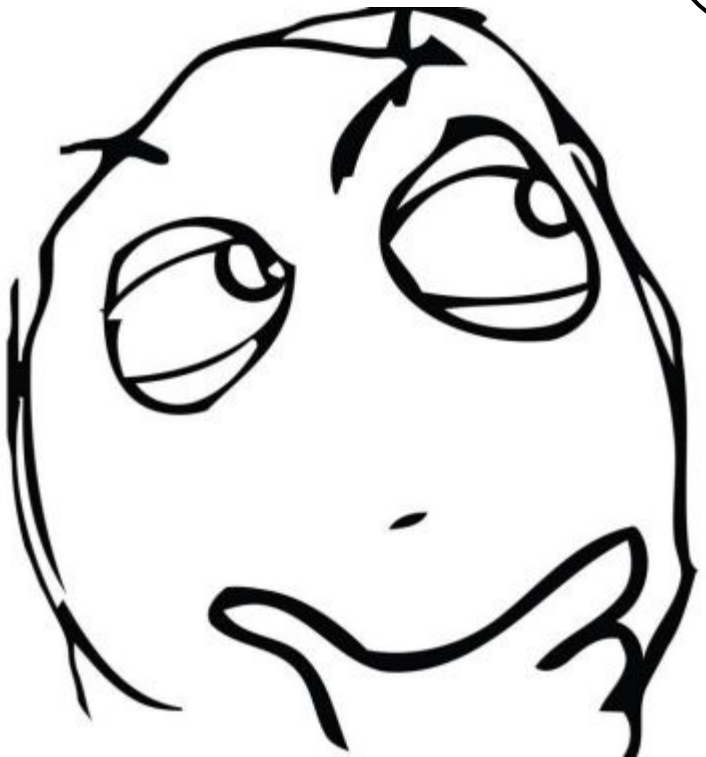


Cloud Enabled Products

Global Component Shortage

The Ugly Conclusion



I must get my project done –
in budget and in time!

Thank You ….. Or ….. Any Questions?

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