The Evolution of IP Systems in OB Truck Design

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A brief history...

Concept
Initial approaches to vendors

Research and technology decisions

From IP Showcase Theatre at IBC 2018

Come and see us!
Hall 9.A02
OB X, the design challenges

• Technology questions (2015)
  – Will it work?
    • Lack of reference sites
    • Not enough hardware to build a meaningful PoC
    • Will compression add complexity?
    • Will 12G SDI become the dominant standard?
    • What about interoperability?
    • How will the engineers cope??!!

• The naysayers
OB X, the naysayers

What’s wrong with SDI?

OB X, the naysayers

Nobody will be able to use it
OB X, the naysayers

There’s no future in IP
The result – Autumn 2016

- SMPTE 2022-6 based system
- intoPIX TICO 4:1 UHD mezzanine compression
- Baseband AES
- Cisco Nexus 9508

Lessons learnt, 2016?

- With some training, broadcast engineers quickly develop an IP skillset
  - Never underestimate their ability to learn
- The user experience doesn’t have to change
- IP systems work, and offer tangible benefits over SDI systems
What’s changed since 2016?

• Industry focus on standards and interoperability
  – AIMS
  – IP Showcase
  – SMPTE 2110 adoption
• A growing number of successful installs
• Far more IP enabled products on the market
• A realisation of the benefits of an IP system
• Many revolutions of the lessons learned cycle

OB Z design

• Much greater choice of IP enabled products
• More confidence to mix and match
• Neater, more elegant design
• Improved system efficiency
• Improved user interface and flexibility
**OB X and OB Z Top Trumps**

<table>
<thead>
<tr>
<th></th>
<th>OB X</th>
<th>OB Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>Build year</td>
<td>2016</td>
<td>2018</td>
</tr>
<tr>
<td>4</td>
<td>Number of native IP products in each truck</td>
<td>15</td>
</tr>
<tr>
<td>2</td>
<td>Number of vendors with IP products in each truck</td>
<td>6</td>
</tr>
<tr>
<td>+++++</td>
<td>Amount of manufacturer support</td>
<td>+</td>
</tr>
<tr>
<td>26</td>
<td>Weeks to build</td>
<td>12</td>
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</tbody>
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**What about Mr Naysayer?**
What about Mr Naysayer?

• Demonstrable interoperability
• There is significant expertise within vendor structures and user base
• A wide selection of IP products on the market
Thank You

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