24/10/2024



Dynamic Media Facilities + Media Exchange A key to Achieving the CBC/Radio-Canada technology Vision

Félix Poulin, Director Media-over-IT architecture February 26th 2025 - Marina Del Rey, CA



Presentation Outline

CBC Drivers and Vision State of The Industry Product market EBU Dynamic Media Facility The Media Exchange Layer (MXL) Initiative User Requirements EBU Geneva Event Tiger Team sprint Governance Next Steps Timeline

Industry Alignment Event in Toronto

CBC 한 Radio-Canada



Drivers for Software Based Production Approach

Short Term Driver: Refresh of Toronto Broadcast Centre



source: Wikipedia Canadian Broadcasting Centre Photo Credit: <u>Canmenwalker</u>

Brownfield rebuild of production spaces and infrastructure for Radio, TV, Web over 8 years

"I don't have a crystal ball for what type of production CBC will need in the future" (François Legrand, Tech Lead, IBC 2024)



Drivers for Software Based Production Approach

Longer Term Driver: Increase Live Production Capabilities in the Regions



- Studio and possibly Control room in region, tap into software functions in major production centers
- Underpin the ability to do live production in regional stations across Canada without having to maintain infrastructure in these facilities
- More regional production capabilities for much less cost



Our Target Solution Flexible Production Systems based on Software running on a shared common infrastructure





CBC / Radio-Canada Flexible Production Platform Vision



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State of the Industry (products)

Many vendors offering integrated (studio in a box) software solutions



State of the Industry (end users)

EBU Dynamic Media Facility - Reference Architecture



Mapping CBC with EBU DMF Architecture

CBC / Radio-Canada Flexible Production Platform Vision



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Priority: Common Media Exchange



Sample Workflow: Live Event Regionalization



Workflow as a Software Based Model



Modern IT Techniques Leveraged To Gain Performance And Efficiency







Media Industry examples where a Common SDK Fostered Wide Adoption and Interoperability

Open Source	•	Developed by one vendor Open Sourced without licensing fees Some vendors have implemented their own version to improve performance, compatible with OSS
	•	Developed by one vendor

- Licenced SDK (not open sourced) enabled rapid and broad adoption
- Smooth integration of major improvements over the years
- Originally developed by one vendor
- Free Open Source
- At basis of many commercial products
- Contributions from community to add new NMOS features
 - CBC 🌐 Radio-Canada



• SDK in development based on nmos-cpp



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Shared implementation of control stack for IP facilities

Media Exchange Layer (MXL) SDK



^{*} Including DMF's Container Platform, Host Platform and Infrastructure Layers



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EBU invited many industry partners to follow up on the IBC



DMF Event

EBU HQ Geneva November, 2024

Goals of The Event

- 1. Presented user requirements for a common Media Exchange Layer (MXL) to enable a multi-vendor ecosystem
- 2. Propose to develop an open source SDK starting with shipping a Minimum Viable Prototype and iterate
 - => Avoid entering a long standardization process at this stage

Result of the Event

- 1. Multiple vendors proposed different solutions with many common aspects
- 2. A group of 6 vendors formed a Tiger Team to form a common proposal



Participants in the EBU Event



Tiger Team Sprint

A group of vendors at the EBU meeting working together on a common proposal to achieve the MXL requirements



90% consensus in the Tiger Team, enough to move on with first trials



Tiger Team Achievements



* Including DMF's Container Platform, Host Platform and Infrastructure Layers

Tiger Team Achievements



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Tiger Team Achievements



* Including DMF's Container Platform, Host Platform and Infrastructure Layers

Governance

- > EBU has approached NABA for wide user representation
- Exploring open source project hosting such as the Linux Foundation
 - Provide Governance structure and IPR suitable to successful OSS projects
 - > Funding mechanisms to ensure viability
- Membership model for opportunities to contribute with requirements, code and feedback



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Timeline for next steps of Industry alignment





Next Step: Industry Alignment Event in Toronto

Goal is to expand the MXL initiative to a broader audience:

More end users, including North American and international media organisations

More Vendors to drive industry-wide adoption

2-days Event to be hosted by CBC Toronto Broadcast Center March 18 and 19, 2025

Contact me if interested to attend felix.poulin@cbc.ca







Thank you