Cross Platform Extras: Interactivity Profile 1 (IP1)

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REVISION HISTORY

| Version	Date	Description
1.0	April 15, 2016	Initial publication

1 INTRODUCTION

This document defines Cross Platform Extras (CPE) Interactivity Profile 1 (IP1). This profile is a CPE-Manifest profile. This document is subordinate to CPE-Manifest found at www.movielabs.com/cpe/manifest.

This document assumes familiarity with the referenced specifications, particular *Common Media Manifest Metadata*. In many cases, this document builds on the best practice for delivery called *Using Media Manifest, File Manifest and Avails for File Delivery (Best Practices)*.

1.1 Background

Interactivity Profiles are designed to provide supplement CPE specs by providing specific implementation constraints. They provide exact instructions about what authoring and playing CPE data.

Both content providers and Profile Player implementers must comply with this specification to claim their implementation is Profile compliant.
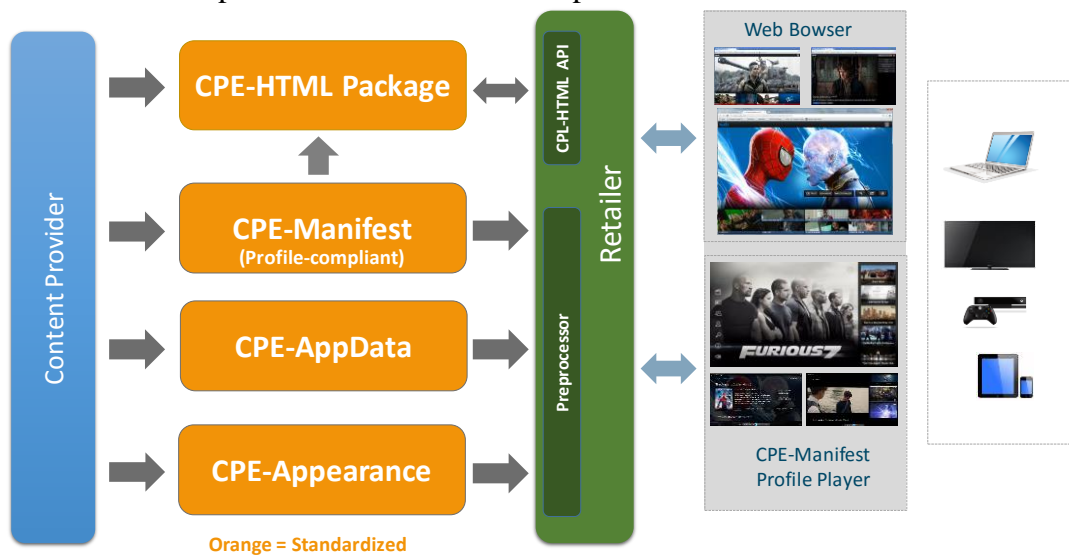
1.2 Document Organization

This document is organized as follows:

1. Introduction—Provides background, scope and conventions
2. Interactivity Profile 1

1.3 Document Naming and Conventions

This document uses conventions as defined in [CM]. This is a less formal document, so strict conventions may not expressly apply in all cases.

1.4 Normative References

[CPE-Manifest]	Cross-Platform Extras API, TR-CPE-API, www.movielabs.com/md/cpe
[Manifest]	MovieLabs Common Media Manifest Metadata v1.5, TR-META-MMM, www.movielabs.com/md/manifest
[CM]	Common Metadata, TR-META-CM, www.movielabs.com/md/md
[CPE-HTML]	Cross-Platform Extras API, TR-CPE-API, www.movielabs.com/md/cpe

1.5 Informative References

[CPEBest]	CPE Best Practices document, www.movielabs.com/cpe/practices
[Chromium]	Chromium, open source browser project, http://www.chromium.org

1.6 Using This Document

This document constrains CPE-Manifest [CPE-Manifest]. It should be used in conjunction with that document. CPE Best Practices [CPEBest] should also be followed as applicable.
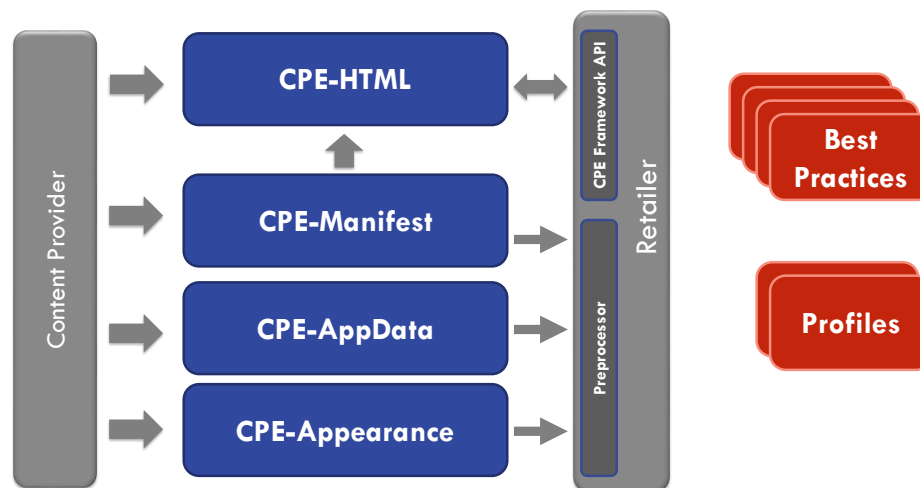
The body of this specification defines structure, but leaves some details to the design of specific UI models. For example, grouping nodes and image aspect ratio choices are not specified above. Profiles include sufficient implementation to guarantee that a specific set of UI implementations will receive all information in the correct form.

Note that profiles do not specify media encoding rules (e.g., bitrates, channels, and codecs).

2 INFORMATION PROFILE IP-1

Profile IP-1 defines a Manifest with three distinct sections:

- Main title (e.g., movie)

- Hierarchically organized collection of bonus material designed to fit into a section of a UI designed for such material. This is referred to as 'out of movie'.

- Groups of time-oriented (tied to the video timeline) collection of bonus material that is displayed in conjunction with playback. This is referred to as 'in movie'.

(Timed Event Sequences)
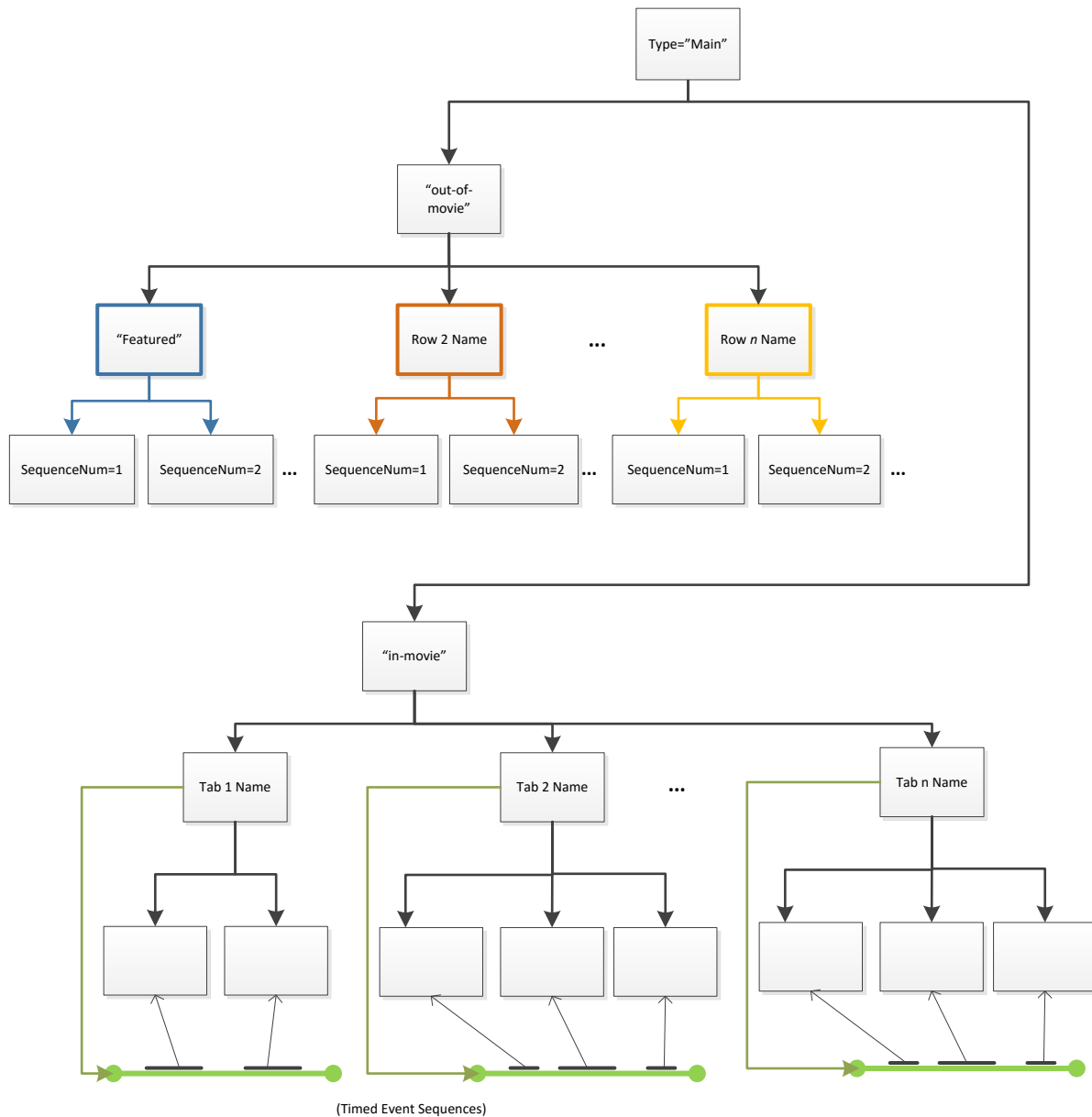
2.1 General Rules

Profile IP-1 supports a single title (e.g., movie or episode), not a collection such as a TV season.

Profile IP-1 is based on the Information Model.

In Manifests using Profile IP-1, Compatibility/Profile='IP-1'

2.2 Experience Structure

Experience				Element encoding
(root)				Contains a ContentID referencing Basic Metadata in the Inventory that describes the main title (movie)
				An Audiovisual instance is included, referencing the main title. Type='Main'
				Two ExperienceChild instances are included.
				• Each has Relationship='issuplementto'.
				• The first has SequenceInfo/Number='1'and references the "out-of-movie" Experience
				• The second has SequenceInfo/Number='2'and references the "in-movie" Experience
	"out-of-movie"			Contains a ContentID referencing Basic Metadata in the Inventory that contains TitleDisplayUnlimited and TitleSort='out-of-movie'
				For each group of content in out-of-movie, there is one ExperienceChild. In the example, "Racing" is a grouping. It is encoded as follows
				• Relationship='ispartof'
				• SequenceInfo/Number starts with one and increases monotonically for each child
				• References (group) Experience.
		(group)		Contains a ContentID referencing Basic Metadata in the Inventory that contains a localized TitleDisplayUnlimited with the user-visible title for the group.
				For each item of bonus material (audiovisual, app or gallery) associated with that group, there is one ExperienceChild. It is encoded as follows:
				• Relationship='ispartof'
				• SequenceInfo/Number starts with one and increases monotonically for each child
				• References (bonus) Experience.
			(bonus)	Contains and Audiovisual, App or Gallery instance corresponding with an item of bonus material
				References metadata with ArtReference referencing images suitable for display as thumbnails underneath the grouping. Under image specs below, these are referred to as 'Thumbnails for videos, apps and galleries".

	"in-movie"		Contains a ContentID referencing Basic Metadata in the Inventory that contains TitleDisplayUnlimited and TitleSort='in-movie'
			Contains one ExperienceChild instance for each subcategory referencing Experience elements that describe these categories. Note that space is assumed to be limited so care should be taken to limit the string length and number of tabs (generally no more than three). ExperienceChild is encoded as follows: • Relationship='ispartof' • SequenceInfo/Number starts with one and increases monotonically for each child • References (tab) Experience.
		(tab)	Contains a ContentID referencing Basic Metadata in the Inventory that contains TitleDisplayUnlimited and TitleSort with the name of the tab (e.g., "Shorts"). Contains a TimedEventSequence referencing Presentations, Media Applications, Galleries and Text Groups. Note that these objects will be displayed in the order corresponding with TimedEvent/StartTimecode in TimedEventSequence. Contains Audiovisual, App and Gallery instances that correspond exactly with the Presentations, Media Applications and Galleries referenced in the TimedEventSequence.

2.3 Audiovisual, App and Gallery

Audiovisual, App and Gallery instances reference Presentations (PresentationID), Applications Groups (AppGroupID) and Galleries (GalleryID) respectively.

Each of these is constructed in accordance with rules for their type as defined in [Manifest] and in the body of this document, with the additional constraints:

- Each "Features" Presentation must include Chapters. Each Chapter must have @index, EntryTimecode and DisplayLabel (localized if appropriate). Chapters should not be included in bonus content.

- Image constraints for galleries are supplied under Images below.

2.4 Metadata

The following additional metadata constraints are imposed:

- Inventory/Video/Encoding/ActualLength must be included.

2.5 Images

2.5.1 Menu Images

All images associated with menu items (i.e., videos, galleries, applications and submenus) are 16:9 unless otherwise stated. A few pixels of cropping should be expected.

Preferred resolutions are as follows:

Image Type	Preferred resolution (pixels)
Thumbnails for videos, apps and galleries	352x198, 714x406, 1076x614
Gallery image	1920x1080

2.5.2 Background Images

Background images are found in the metadata associated with the ContentID in the "Main" Experience.

Specific conventions are pending.