



IMDAAlliance.org

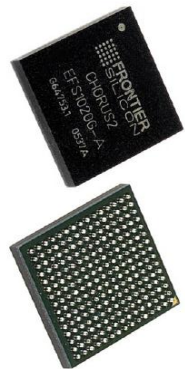
# Internet Media Device Alliance Technical Overview

*Dec 8<sup>th</sup> 2009*

- **Introduction**
- **The concept of IMDA Profiles**
  - **Broadcasters & Content providers**
  - **Receiver manufactures and Technology providers**
- **IMDA Profile 1 high level overview**
- **Questions...**

A leading global supplier of digital radio receiver solutions for broadcast (AM, FM, DAB, DAB+, DMB) and Internet radio (wired, wireless, UPnP streaming) CE devices

HQ in UK with 150 employees  
(2/3 engineering located in UK and China)



RF & BB  
Chips



Receiver modules with  
full Application SW

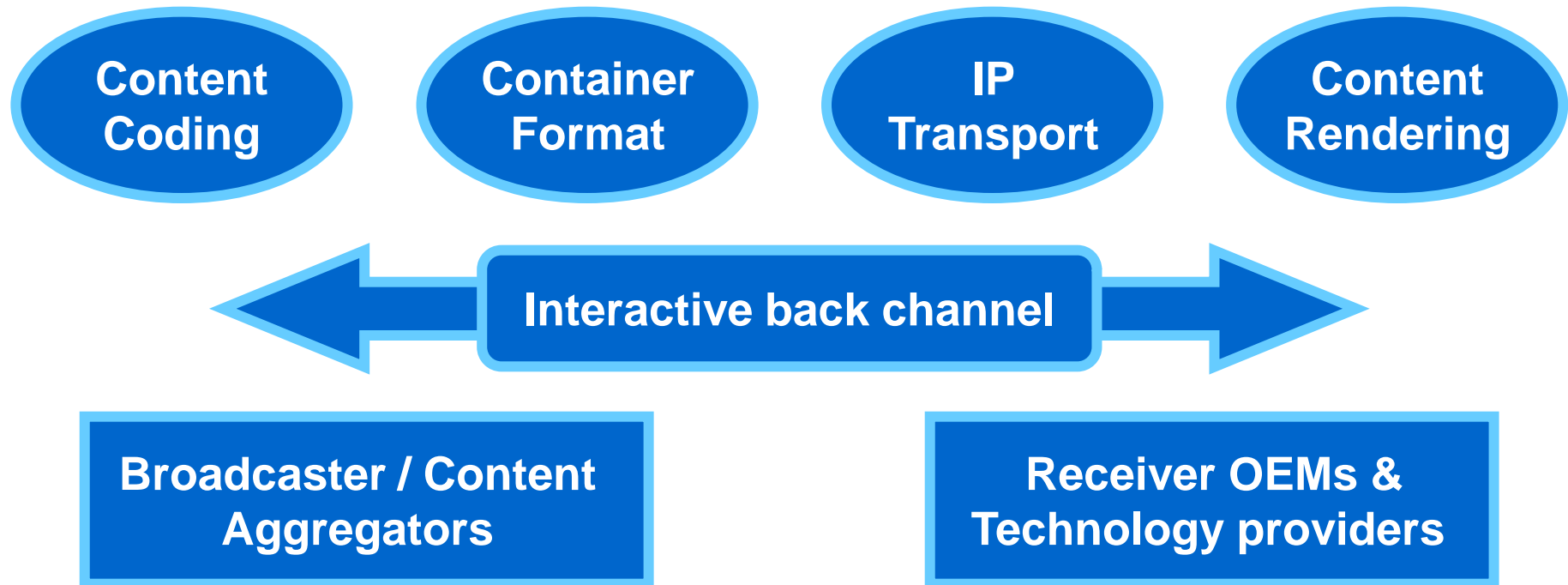


Turn-key CE  
reference designs

**An IMDA Founder and Steering Board member**

# Introducing Profiles

- **IMDA is defining a set of minimum Internet Media Device broadcast and receiver profiles to ensure end-to-end interoperability and interactivity**



- **At least two profiles**
  - Profile 1: All inclusive, minimal requirement – mass market
  - Profile 2: Advance, feature rich – higher end market

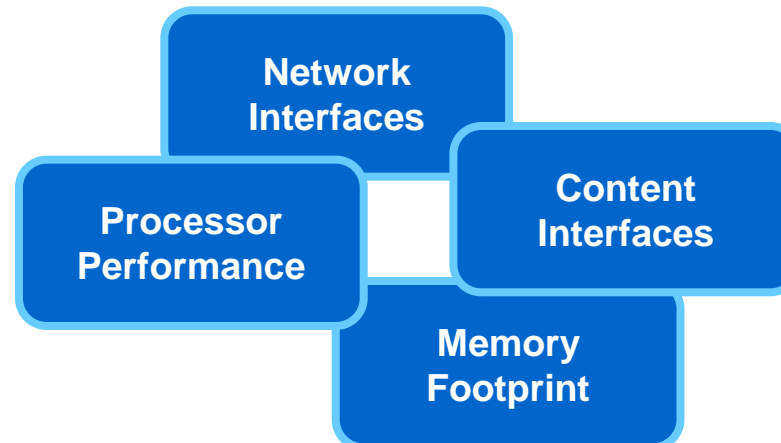
- **Consistent presentation of streams**
  - Which codecs to use?
  - Which transports to use?
  - Which bitrates to offer?
  - Optimise / streamline our architectures
- **Consistent discovery of content**
  - Live streams and on-demand content
  - Automatically tracks changes
- **Enhancing streaming experiences**
  - Delivery of real-time text & visuals
  - Simple interactivity / tagging / bookmarking

**Broadcaster / Content  
Aggregators**

# Receiver OEMs & Technology providers care about...

- **Cost & Power optimised receivers**
  - Matching system resource to content services
- **Compatibility**
  - Universally agreed Content CODECS, Container and Transport formats
- **Time-to-market**
  - Common content service APIs
- **Product differentiation**
  - Product Industrial Design and build quality
  - Audio quality
  - User Interface
  - Content
  - Price

**Receiver OEMs &  
Technology providers**

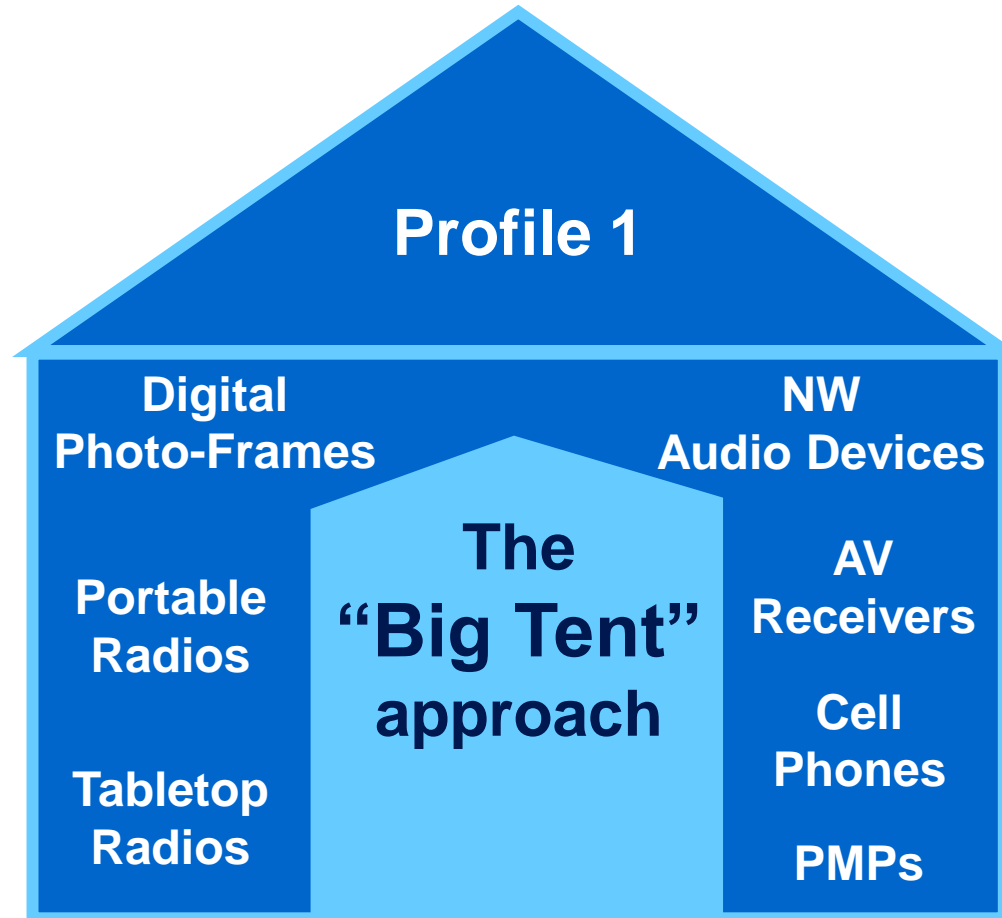


# Universally we care about...

- **Relationships**
  - Understanding the business models of manufacturers and broadcasters to agree a common approach to service delivery to consumers
- **Marketing and promotion**
  - Consistency of terminology and consumer messages
  - Consistency of consumer experience
  - Clarity of functional differences between devices (“profiles”)

# Introducing Profile 1

- **Profile 1 objective: to define an all-inclusive minimal feature set ensuring widest possibly compatibility with existing Internet Media Devices & services**



- **Profile 1 IMD is an IP connected CE device that can discover, connect to, decode and play back live Internet Radio (IR) broadcasts**
- **The device should, at least:**
  - **Present browseable categorized list or filterable list of IR stations**
  - **Receive and decode the Live Stream being broadcast by a user-selected IR station and output it either to speakers or to an audio output connector**
  - **Receive regular updates to its IR stations directory to keep the directory's content relevant and correct**
- **Minimal CODEC support: WMA, MP3**
- **Minimal Container support: WMA via ASF (excluding DRM and Video)**
- **Minimal Transport support: MP3 & WMA over HTTP**
- **Common metadata format: XML**



- **Standardised delivery of Electronic Program Guide information**
  - Enabling easier station and program location and new station discovery
- **Standardised delivery of enhanced metadata**
  - Consistent station logo format enabling better station brand recognition
  - Consistent artist / program data enabling mass receiver device support
- **Enhanced interactivity support**
  - Broadcasters and advertisers get to know their audience better
  - Value added services enabling new revenue streams
- **Further CODEC support**
  - Making use of latest and greatest Audio CODEC to ensure optimised balance between cost / bit rate and quality
- ...



- **IMDA Profile definitions will ensure broadcasters, content aggregators, receiver manufactures and technology providers have a clear minimal feature set to**
  - **Maximise content interoperability and interactivity**
  - **Optimise cost by removing unnecessary “fat” from the system**
  - **Create greener products by minimising power consumption**
- **While allowing product differentiation**
- **Providing consumers and retailers with confidence to ensure mass market adoption**



# Thank You!



[IMDAlliance.org](http://IMDAlliance.org)

