Update for W3C Media and Entertainment Interest Group
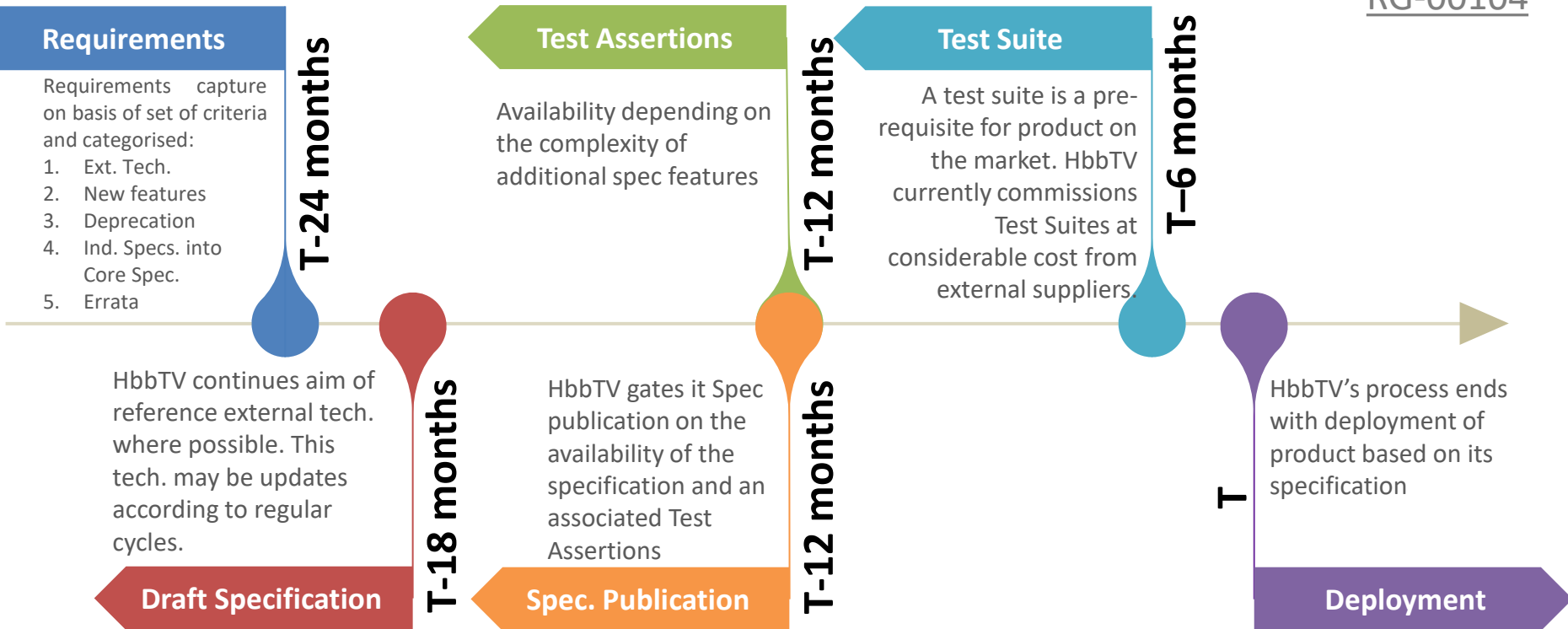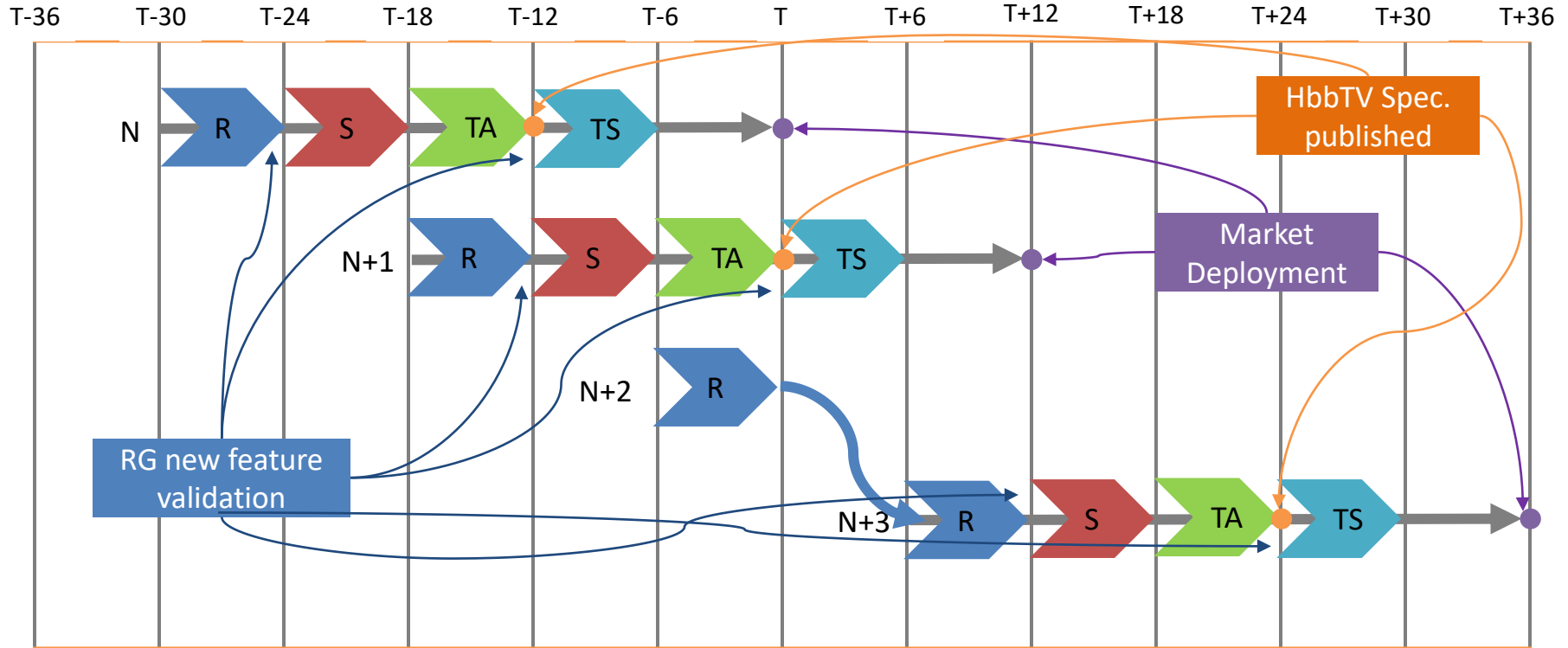## 25th October 2021

HbbTV Apps and Web Technologies

- Some HbbTV apps closely integrate with broadcast TV
  - These may use libraries and tools from the web but are really their own thing
  - May be programme independent such as content guides / programme guides or
  - Content-related such as supporting information, subtitles / captions, ...
- Most common HbbTV app is broadcasters "catch-up" services (i.e. VoD)
  - Typically no broadcast integration
  - Streaming will likely use native DASH player rather than MSE
  - <video> used by some apps but old APIs based on <object> element may be used to maximise reach of installed base
- Information services
  - Typically no broadcast integration at all & almost nothing specific to HbbTV
  - With responsive design, same HTML+JS may be be used for desktop, mobile & TV

HbbTV TVs and Web Technologies

- Specifications and implementations not the same ..
  - HbbTV 2.0.1/2 specs based on a selection of web standards defined in 2013 plus some cherry picking
  - HbbTV 2.0.3 spec based on a selection of web standards implemented in 2018 desktop browsers
    - https://www.w3.org/2018/12/webmediaapi.html
- Implementations vary enormously
  - Wholly new products may be based on HTML UA from the previous year
    - e.g. 2022 products may use 2021 browsers or they may not
  - Evolutions of previous years products may (or may not) update the HTML UA to a newer version
  - Low-end products may be sold for several years with no software changes
- Moving to a new version of an HTML UA costs
  - If UA porting is outsourced – supplier will charge
  - If UA porting is in-house – optimisations for a particular TV OS will need re-porting
    - The more the port is optimised, the bigger the barrer to moving to a new version
  - There's no business model to fund these costs for the TV manufacturer
- And then there are security bugs to be addressed

HbbTV life cycle examples*

RG-00104

Requirements

Requirements capture on basis of set of criteria and categorised:
1. Ext. Tech.
2. New features
3. Deprecation
4. Ind. Specs. into Core Spec.
5. Errata

T-24 months

HbbTV continues aim of reference external tech. where possible. This tech. may be updates according to regular cycles.

Draft Specification

T-18 months

Test Assertions

Availability depending on the complexity of additional spec features

T-12 months

HbbTV gates it Spec publication on the availability of the specification and an associated Test Assertions

Spec. Publication

T-12 months

Test Suite

A test suite is a pre-requisite for product on the market. HbbTV currently commissions Test Suites at considerable cost from external suppliers.

T–6 months

T

HbbTV's process ends with deployment of product based on its specification

Deployment

Today

- Working on HbbTV specification 2.0.4
  - One key element is integration with TV OS accessibility features
    - See https://www.hbbtv.org/wp-content/uploads/2021/09/Nigel-Moore-HbbTV-Webinar-Accessibility-2021-09-21.pdf
  - Other key features include
    - Voice assistant integration &
    - Integration with DVB-I OTT live (linear) TV services

More Details

- Come along to the 9th HbbTV symposium and awards
  - November 24th – 25th
  - Hybrid event, online & in-person in Paris
  - https://www.hbbtv.org/9th-hbbtv-symposium-and-awards-2021/