

# Widgets @ W3C

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- Why do this work?
  - Interoperability
  - Web Application Environment
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  - Informative document
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# Widgets



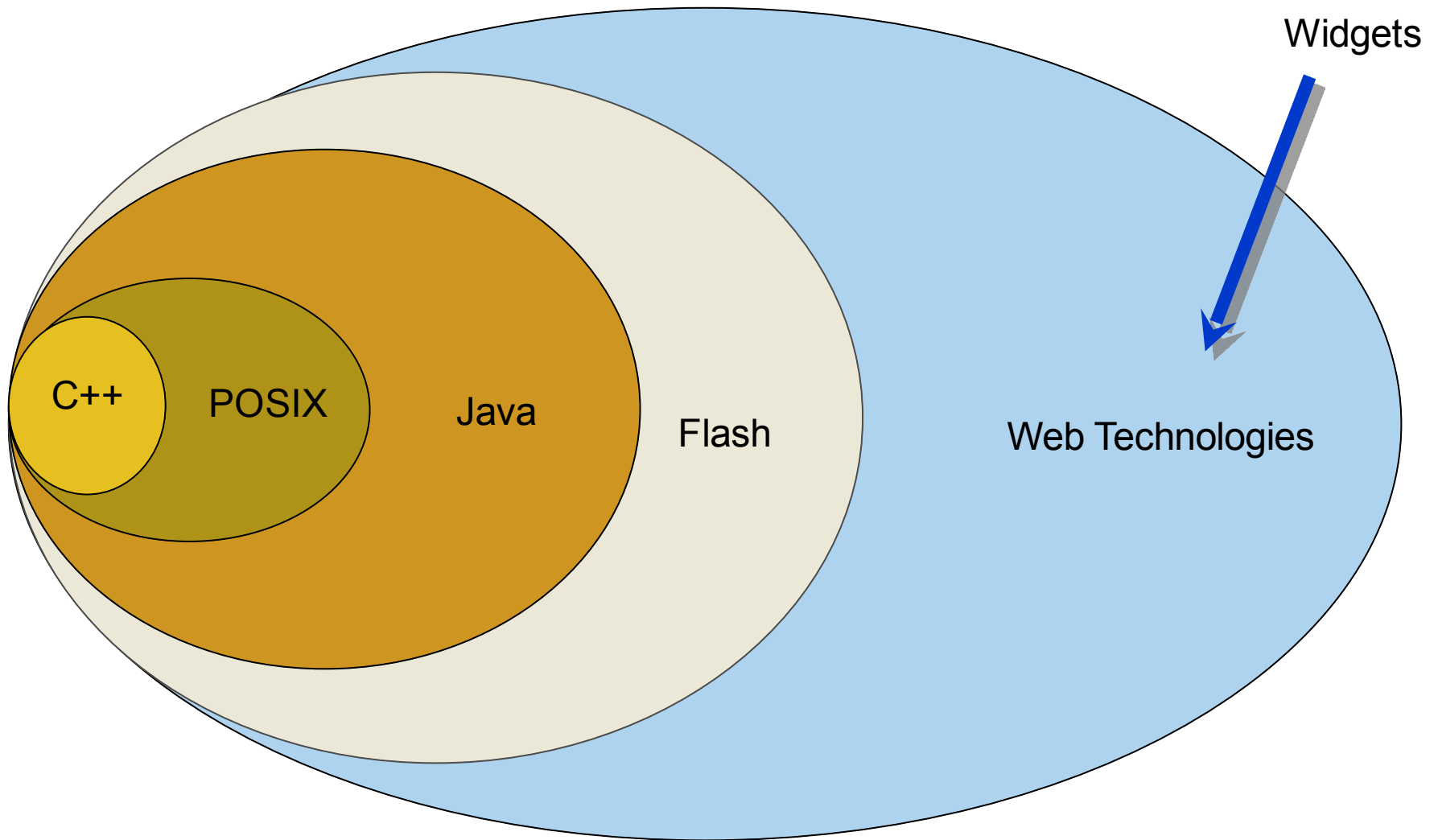
# Definition

*Widgets are a class of **client-side web applications** for displaying and updating local or remote data, packaged in a way to allow a single download and **installation on a client machine or device.***

*Widgets **typically run as stand alone applications** outside of a web browser, but it is possible to embed them into web pages.*

**Goal of the  
Standardization is  
Interoperability!**

# Application Environments



Relative number of app developers (illustrative only)

# Documents Published to Date

- Informative
  - Widgets Landscape
- Specifications
  - Requirements
  - Packaging and Configuration Specification
  - Digital Signature Specification

# The Widget Landscape

- Survey of several widget engines including: Dashboard, Konfabulator, Opera, Nokia, Sidebar, Google Gadgets, etc.
- Compares important properties vis-à-vis interoperability, including:
  - Packaging format
  - Metadata
  - Media type
  - APIs
- Status: ongoing; most likely will be “completed” as a Working Group Note



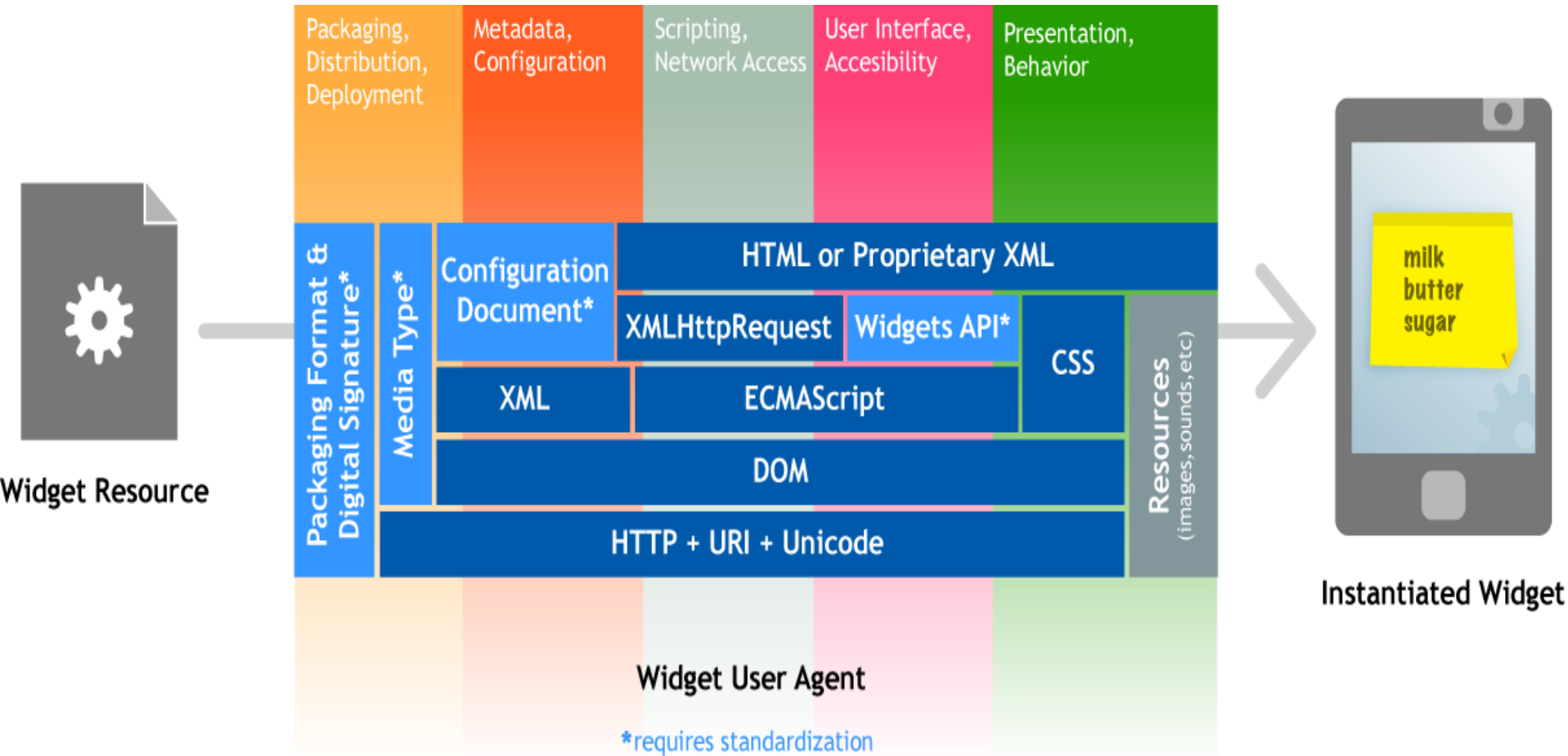
# Requirements' Design Goals

- Design Goals
  - Adopt industry best practices
  - Re-use existing specs
  - Conform to relevant W3C guidelines:  
Accessibility, Internationalization, Device Independence, ...
  - Security considerations

# Requirements

- High-level Requirements (~40)
  - Packaging Format
  - Configuration Document (manifest)
  - Scripting Interfaces
  - User Interface
  - Security
- Requirements include some functionality outside of the scope of our WG (e.g. UI, Device APIs, etc.)
- Status: 14 April 2008 Working Draft

# Specs in the Web Stack Context



# Packaging & Configuration Spec

- Packaging Format
- Configuration Document
- Processing Model

# Packaging Format

- ZIP is the packaging format (with a few exceptions)
- Compression method supported
- File and folder name conventions
- Media type (`application/widget`)
- Extension name for Widget resources (`.wgt`)

# Configuration Document

- XML document (`config.xml`)
- Defines a namespace ([www.w3.org/ns/widgets](http://www.w3.org/ns/widgets))
- Metadata includes
  - Name
  - Description
  - Author
  - License
  - Start file
- Extensions by UA vendors expected

# Processing Model

- Defines steps for processing a Widget resource including:
  - Verifying the ZIP and its contents
  - Processing Digital Signature (if present)
  - Processing the configuration file
  - Error handling
- Detailed error handling is included to improve interoperability
- Status: 14 April 2008 WD published; Last Call in 4Q08

# Digital Signature Spec

- Prior to instantiating a Widget, the UA can use a signature to verify the authenticity and integrity of a Widget resource
- Defines a profile of *XML Signature* for signing a Widget:
  - Every file in the ZIP must be signed
  - Signature must be named `signature.xml`
  - SHA1 is the digest method for Reference
  - `KeyInfo` element must conform to X509v3



# Digital Signature Spec

- Procedure for how to sign a Widget resource is defined
- Procedure for verifying a Widget resource is defined
- Needs work on *Security Considerations*
- Working with XML Security WG
- Status: 14 April 2008 First Public WD published

# Work in Progress

- Scripting APIs (access to manifest data)
- Event handling
- Security model
- Localization model
- Automatic Updates
- ...

# See Also ...

- Web Application Formats WG Home Page
  - [www.w3.org/2006/appformats/](http://www.w3.org/2006/appformats/)
- Published documents
  - [www.w3.org/TR/](http://www.w3.org/TR/)
- Editor's Drafts (latest stuff)
  - [dev.w3.org/cvsweb/2006/waf/](http://dev.w3.org/cvsweb/2006/waf/)
- Public mail list
  - [lists.w3.org/Archives/Public/public-appformat](http://lists.w3.org/Archives/Public/public-appformat)