TTML Profiles

G. Adams

TPAC2013

TTML1 Profiles (1)

- Expression of authorial intent about what a processor must support in order to process a document.
- If processor doesn't satisfy profile requirements, then must abort processing unless overridden.
- May be interpreted as a definition of a **processor profile**.

TTML1 Profiles (2)

- A profile definition consists of an ordered set of profile specifications.
- A profile specification is either a *feature* specification or an *extension* specification.
- Each feature and extension is referred to using a *designation*.
- Each feature and extension is assigned a *value* (explicitly or by default): used, required, optional.

TTML1 Profiles (3)

- Feature designations and their associated semantics are defined only by the TTWG.
- Extension designations and their associated semantics are defined by either TTWG or 3rd parties.

TTML1 Profiles (4)

- Profile definition may be inline (embedded within) or external to document.
- When external, referred to as Profile Definition Document.
- Multiple profile definitions may be combined to form effective profile.
- Single AND profile combination method.

TTML1 Profiles (5)

- Two mechanisms for referring to multiple profiles:
  - Employ **use** attribute on **ttp:profile** element to include specifications from a *baseline* profile.
  - Use of multiple **ttp:profile** elements within document.
- Both mechanism may be used together.

TTML1 Profiles (6)

- When combining specifications from a referenced *baseline* profile and an *inline* profile definition, a REPLACE combination method is used.
- The REPLACE combination method says that a following specification replaces a prior specification when both specifications refer to the same feature or extension.

What’s Missing?

- How to associated a profile with a profile designator?
- How to define requirements or options on content (documents) as opposed to processors? i.e., how to define a **content** profile?
- How does instance document refer to a content profile?
- What processing requirements (mandatory or optional) are implied by content profiles?
- How to combine profiles using methods other than AND?
- How to define a combination profile from multiple profiles?
- How to combine profile specifications using methods other than REPLACE?
- How to relate new features or extensions with existing features or extensions, particularly as a restriction (subset)?

Profile Designator Proposal

- Add @designator on ttp:profile:
  - Value is xsd:anyURI, where URI serves as designator for said profile.

Content Profile Proposal (1)

- Add @type on ttp:profile:
  - Value set: {*processor*, *content*}
  - Default value *processor*.
- Modify @value on ttp:{feature,extension}:
  - Add *prohibited* value.
  - Deprecate *use* value (not used in practice).
  - Refine semantics of *required* and *optional* according to whether used in processor or content profile.

Content Profile Proposal (2)

- Add @ttp:contentProfile on tt:root, to refer to single content profile.
- If author desires to declare adherence to multiple content profiles, then use multiple ttp:profile elements with @type *content*.
- Add #contentProfile feature.

Content Profile Proposal (3)

- Add @ttp:validation on tt:root:
  - Value set: {required, optional}
  - Default value *optional*.
  - If *required* and validation not supported by processor, then must abort unless overridden.
- Add @ttp:validationAction on tt:root:
  - Value set: {abort, warn, ignore}
  - Default value *abort*.
  - If *abort* and validation fails, then must abort unless overridden.
  - If *warn* and validation fails, then warn unless overridden.
- Add #validation feature.

Profile Combination Proposal

- Add @ttp:profileCombination to tt:root:
  - Value set: {replace, or, and}
  - Default value *or*.

Logic Table – Processor Profile

first	second	replace	or	and
optional	optional	optional	optional	optional
optional	required	required	required	optional
required	optional	optional	required	optional
required	required	required	required	required

Logic Table – Content Profile

first	second	replace	or	and
optional	optional	optional	optional	optional
optional	required	required	required	optional
required	optional	optional	required	optional
required	required	required	required	required
optional	prohibited	prohibited	prohibited	optional
prohibited	optional	optional	prohibited	optional
required	prohibited	prohibited	prohibited	error
prohibited	required	required	prohibited	error
prohibited	prohibited	prohibited	prohibited	prohibited

Combination Profile Proposal

- Change content model for ttp:profile to: ttp:{feature,extension}*|ttp:profile*.
- Add @ttp:profileCombination to ttp:profile:
  - Value set: {replace, or, and}
  - Default value *or*.

Profile Specification Combination Proposal

- Add @combine to ttp:profile:
  - – Value set: {replace, or, and}
  - – Default value *replace*.

Feature Relation Proposal

- Add @restricts to ttp:{feature, extension}:
  - Value is xsd:anyURI, where URI refers to a defined feature or extension designation.
  - A ttp:feature may only refer to a feature designation.
  - A ttp:extension may refer to a feature designation or an extension designation.
- Is there a use case for @extends using same format? e.g., to track derivation in new feature|extension?