

Open-CMSIS-Pack

Technical Project Meeting 2021-09-07

This meeting is recorded !



Agenda

- Welcome and review of the agenda
- Feedback to: Extending Pack Descriptions with “features”
- CMSIS-Pack description extension points
- Cpackget – contributors wanted
- Wrap Up

Support of Component Features in PACK description

- <https://github.com/Open-CMSIS-Pack/Open-CMSIS-Pack/issues/21>
- Maxime commented and we had a follow up discussion:
there is multiple independent gaps we need to analyse separately
 - Identify devices with a “feature” that is required by a component/layer
 - Discoverability of components (query of description, keywords)
 - Component configuration parameters
 - Construction of the component ID
 - Component <-> API binding

=> Sufficiently captured by “CMSIS-Pack GAP Analysis” ([#10](#)) ?
- Any other feedback?

CMSIS-Pack description extension points ([#10](#))

- Draft version of schema attached

```
<!-- Extension Point -->
<xs:complexType name="ExtensionType">
  <xs:sequence>
    <xs:any namespace="##any" processContents="lax" minOccurs="0" maxOccurs="unbounded" />
  </xs:sequence>
  <!-- name identifies the environment for the extension this section belongs to -->
  <xs:attribute name="name" type="xs:string" use="required" />
  <xs:anyAttribute/>
</xs:complexType>

<!-- package level extension -->
<xs:element name="packageExt" type="ExtensionType" minOccurs="0"/>
<!-- components level extension -->
<xs:element name="componentsExt" type="ExtensionType" minOccurs="0"/>
<!-- component level extension -->
<xs:element name="componentExt" type="ExtensionType" minOccurs="0"/>
```

CMSIS-Pack description extension points (cont'd)

```
<!-- generators level extension -->
```

```
<xs:element name="generatorsExt" type="ExtensionType" minOccurs="0" />
```

Already existing: rename for consistency ?

```
<!-- Generator tools specific section ignored by other tools -->
```

```
<xs:element name="extensions" minOccurs="0">
```

```
<!-- component files extension -->
```

```
<xs:element name="filesExt" type="ExtensionType" minOccurs="0" maxOccurs="unbounded"/>
```

No extension to <file> as this should be address on <files> level

cpackget – contributors/collaboration wanted

- Extend cli to support packlist file generated by ‘cbuildgen’ [#7](#)
- Installation of packs must be gated by user acceptance [#6](#)
- Protecting CMSIS-Pack content from malicious tempering
 - Digital signing

Discussion

- API taxonomy vs. Component taxonomy
 - “inconsistency” between RTOS with public api and without
 - Cclass=“CMSIS” Cgroup=“RTOS2” Csub=“FreeRTOS”
 - Cclass=“RTOS” Cbundle=“FreeRTOS” Cgroup=“Core”
 - USB stack vs. driver
 - Cclass=“USB”
 - Cclass=“CMSIS-Driver” Cgroup=“USB Host”
 - Cclass=“CMSIS-Driver” Cgroup=“USB Device”

Wrap Up

[Issue Overview](#)

Next week:

- (Action) Please contribute your topics to the agenda ahead of the meeting

September:

- Protecting CMSIS-Pack content from malicious tempering (TBD)

Next Meeting: Tuesday Sep. 14th 2021, 15:00 – 16:00 (UK)

Thank you

