UPDATES FROM THE CORE FRAMEWORK

ECLIPSE SMARTHOME TURNED INSIDE OUT

© 2017 Simon Kaufmann - Made available under the EPL 2.0
HELLO
My name is

@SJKA
SIMON KAUFMANN
WTF ARE…

PROFILES
COMMUNICATION FLOW

THING MANAGER — COMMUNICATION MANAGER — THING HANDLER
COMMUNICATION FLOW

THING MANAGER → COMMUNICATION MANAGER ← PROFILE ← THING HANDLER
PROFILES

MASTER PROFILE

User

OFF

Item

Device
PROFILES

MASTER PROFILE

User → Command → OFF → Device

User

COMMAND

ON

Item

OFF

Device
**PROFILES**

**MASTER PROFILE**

- User
- Item: OFF
- Device

COMMAND: ON
PROFILES

MASTER PROFILE

User

Item OFF

Device
PROFILES

MASTER PROFILE

User  Item  Device

OFF  UPDATE ON
PROFILES

MASTER PROFILE

User ON Item Device
SLAVE PROFILE

User

Item

OFF

Device

Profile

MASTER

SLAVE
SLAVE PROFILE

User ➔ COMMAND ➔ ON ➔ Item ➔ OFF ➔ Device ➔ Profile
SLAVE PROFILE

User

Item

Device

Profile

COMMAND

ON

COMMAND

ON

COMMAND

ON

COMMAND

ON

OFF
SLAVE PROFILE

User

Item

Device

Profile

OFF
SLAVE PROFILE

User  OFF  UPDATE ON  Device  Profile
Item
SLAVE PROFILE

User  Item  Device  Profile

ON
SLAVE PROFILE

User

Item

Device

Profile

-> COMMAND

ON

ON
SLAVE PROFILE

User

Item

ON

Device

Profile
SLAVE PROFILE

User

Item

Device

Profile

ON

UPDATE ON
PROFILES

TRIGGER PROFILE

Device | Profile | Item
TRIGGER PROFILE

Device

Profile

Item
TRIGGER PROFILE

Device → EVENT → PRESSED → TOGGLE PROFILE → Profile → Item

PROFILES
TRIGGER PROFILE

Device → Profile → Item

TOGGLE PROFILE
COMMAND ON

?
TRIGGER PROFILE

Device | Profile | Item

ON

TOGGLE PROFILE
PROFILES

TRIGGER PROFILE

Device
Profile
Item
TRIGGER PROFILE

Device → Event → Profile → ON

- Pressed

Profile

Item
TRIGGER PROFILE

Device -> Profile (TOGGLE PROFILE) -> Item

COMMAND
OFF
ON
TRIGGER PROFILE

Device

Profile

Item

TOGGLE PROFILE

OFF
EXAMPLE USE-CASE
EXAMPLE USE-CASE
EXAMPLE USE-CASE
EXAMPLE USE-CASE

EVENT -> CMD

PRESSED -> ON

OFF

PROFILES
EXAMPLE USE-CASE
EXAMPLE USE-CASE
EXAMPLE USE-CASE
PROFILES

EXAMPLE USE-CASE

OFF

ON

ON

ON
EXAMPLE USE-CASE

UPDATE -> CMD

ON

ON
EXAMPLE USE-CASE
EXAMPLE USE-CASE
EXAMPLE USE-CASE
EXAMPLE USE-CASE
EXAMPLE USE-CASE
EXAMPLE USE-CASE
PROFILES

EXAMPLE USE-CASE

UPDATE -> CMD
OFF
OFF
EXAMPLE USE-CASE
PROFILES

NEXT STEPS

- Integrate Auto-Update
- Implement further trigger profiles
- Documentation
- Export the API
- Reference binding(s)
- Paper UI support
ITEM STATES WITH...

UNITS
To facilitate type determination, value formatting and calculations, an optional unit property should be introduced to number items.
AUTOMAGICAL CONVERSION

Widget:
unit=°F (optional)

Item:
dimension=TEMPERATURE
unit=°F (optional)

Text label="%.1f °F"

Number:TEMPERATURE label="%.1f K"

ChannelType
dimension=TEMPERATURE

<channel-type id="temperature">
  <dimension>Temperature</dimension>
</channel-type>
AUTOMAGICAL CONVERSION

Widget:
unit=°F (optional)

Item:
dimension=TEMPERATURE
unit=°F (optional)

ChannelType
dimension=TEMPERATURE

<channel-type id="temperature">
  <dimension>Temperature</dimension>
</channel-type>

Text label="%.1f °F"

Number:TEMPERATURE label="%.1f K"

UPDATE
QuantityType
value=24.2
unit=°C
UNITS

AUTOMAGICAL CONVERSION

Widget:
  unit=°F (optional)

Item:
  dimension=TEMPERATURE
  unit=°F (optional)

ChannelType
  dimension=TEMPERATURE

Text label="%.1f °F"

Number:TEMPERATURE label="%.1f K"

<channel-type id="temperature">
  <dimension>Temperature</dimension>
</channel-type>

297.4 K

MASTER PROFILE
AUTOMAGICAL CONVERSION

Widget:
unit=°F (optional)

Item:
dimension=TEMPERATURE
unit=°F (optional)

ChannelType
dimension=TEMPERATURE

Text label="%.1f °F"

Number:TEMPERATURE label="%.1f K"

<channel-type id="temperature">
  <dimension>Temperature</dimension>
</channel-type>

75.6 °F

297.4 K
ITEMS GET...

META-DATA
WORK IN PROGRESS

PR #4390
THE IDEA

Allow add-ons to provide custom meta-data on items.

=> Apple HomeKit Integration
=> Alexa Integration
=> Hue Emulation
=> ...

META-DATA
META-DATA

EASY INTEGRATION

Switch "My Fan" { homekit="Fan.v2", alexa="Fan"[type="oscillating", speedSteps=3] }
META-DATA

NEXT STEPS

- Gathering feedback
- Handling of exceptional cases
- Code polishing
- Unit tests
- Documentation
- Move tags’ persistence there
- Config description & Paper UI support
REWORKING THE SCHEDULER
WORK IN PROGRESS

PR #4295
SCHEDULER

REASONING

- Reduce complexity
- Enhance maintainability
- Benefit from Java 8 features
- Leverage OSGi
- Support CRON (and others in future)
- Automatic Cleanup
LEVERAGE OSGI

@Component
public class DemoComponent {

    @Reference
    private Scheduler scheduler;

    @Activate
    public void activate() {
        scheduler.schedule(() -> {
            // do something
        }, "0 15 * * *");

        scheduler.after(Duration.ofMinutes(10)).thenRun(() -> {
            // do something
        });
    }
}
@Component(property = { "cron=0 15 * * *" })
public class SimpleCronJob implements CronJob {

    @Override
    public void run(Map<String, Object> data) throws Exception {
        // do something
    }
}

SCHEDULER

LEVERAGE OSGI
NEXT STEPS

- Gathering feedback
- Merge into codebase
- Replace current usages of the old one
- Implement ISO 8601 date expression support
TONIGHT

DISCUSSIONS

TONIGHT