



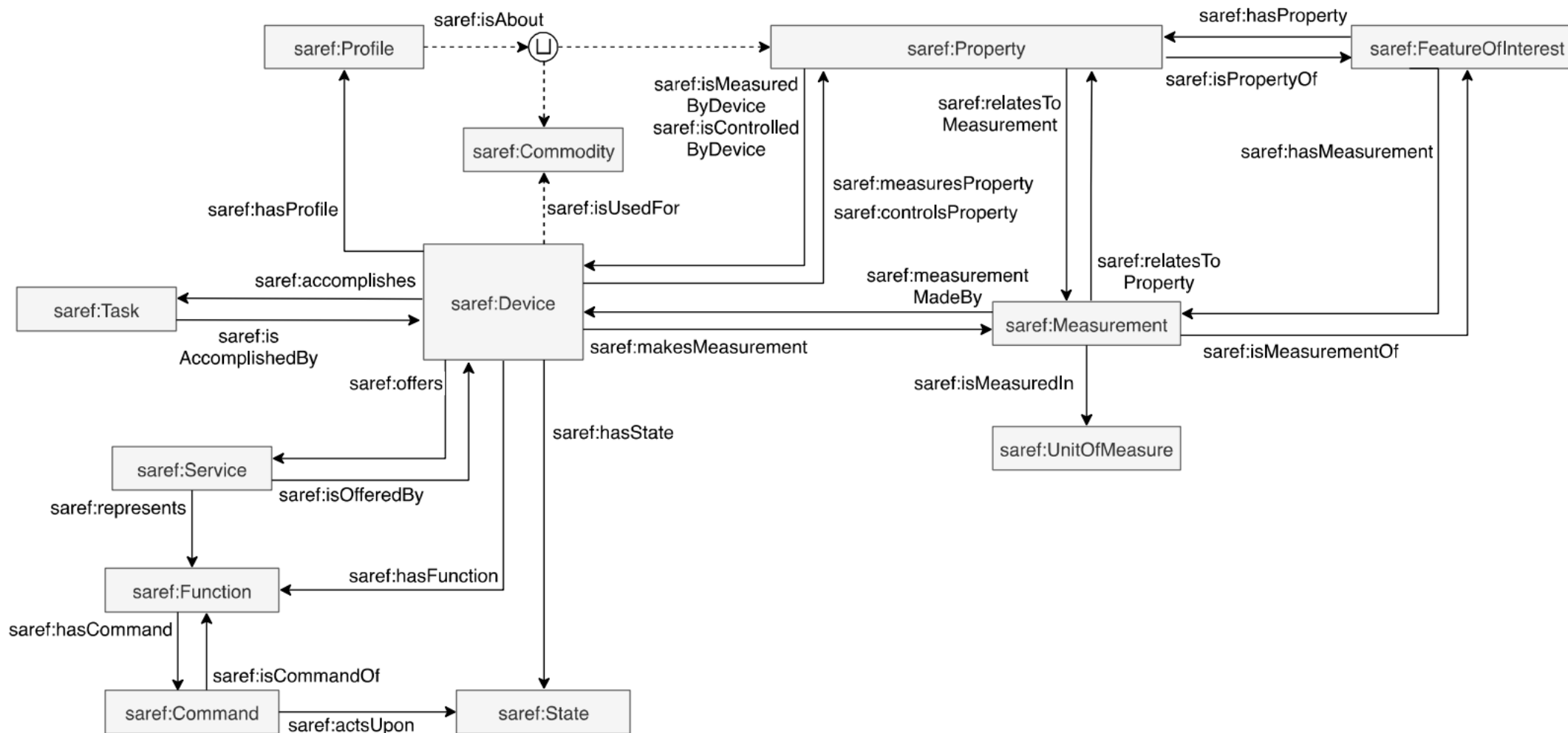
The Standards People

Le framework de développement de l'ontologie ETSI SAREF (Smart Applications REference ontology)

Presented by: **Maxime Lefrançois**

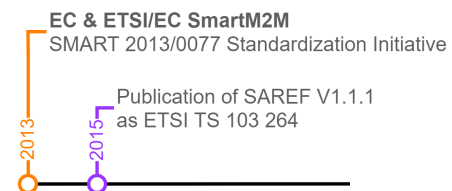
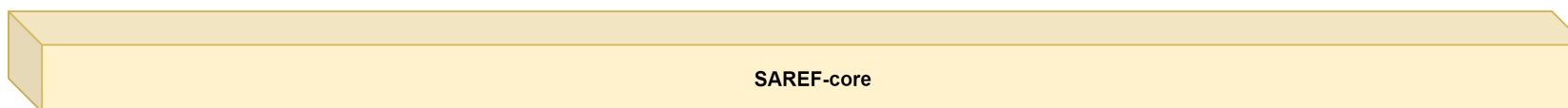
For: Journée EGC&IA 2021

Aperçu de ETSI SAREF V3.1.1



Développement initié par la CE et piloté par ETSI SmartM2M

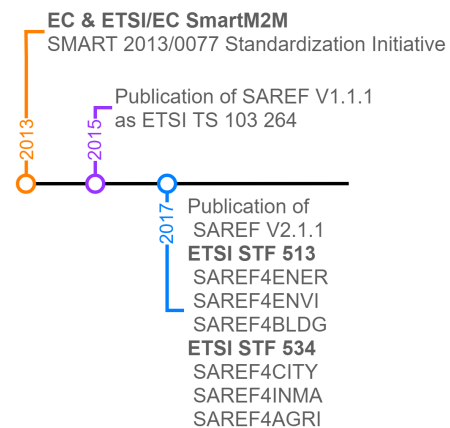
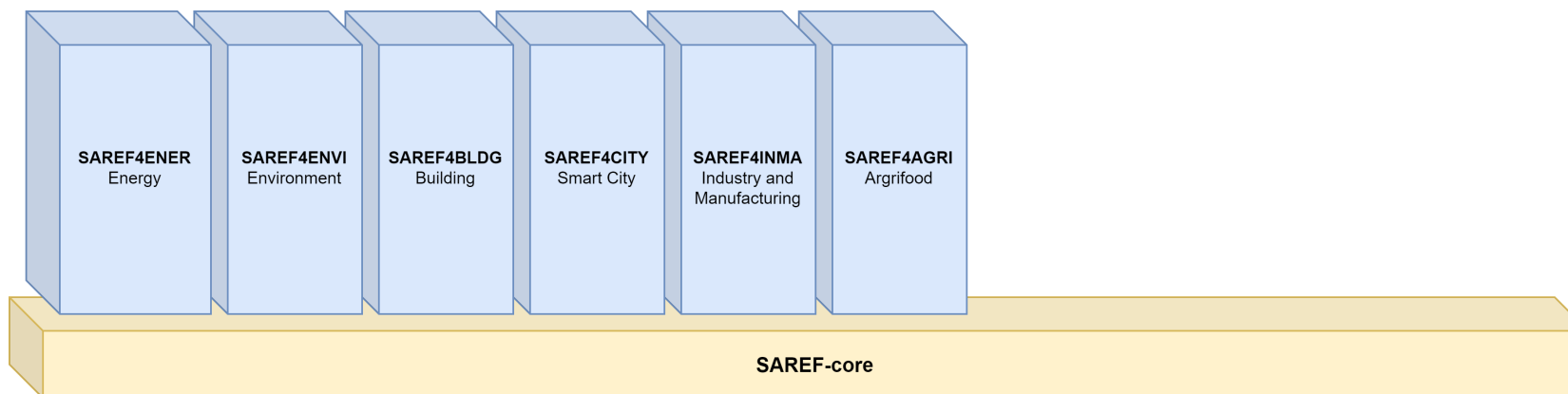
Ontologie
noyau



Une ontologie noyau, des extensions pour des verticales

Extensions

Ontologie
noyau

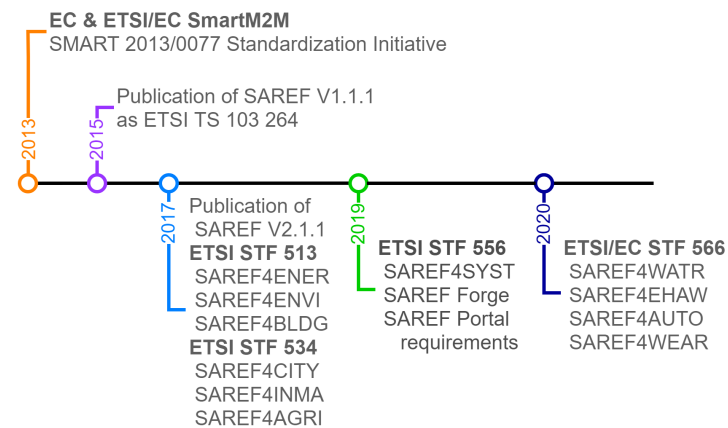
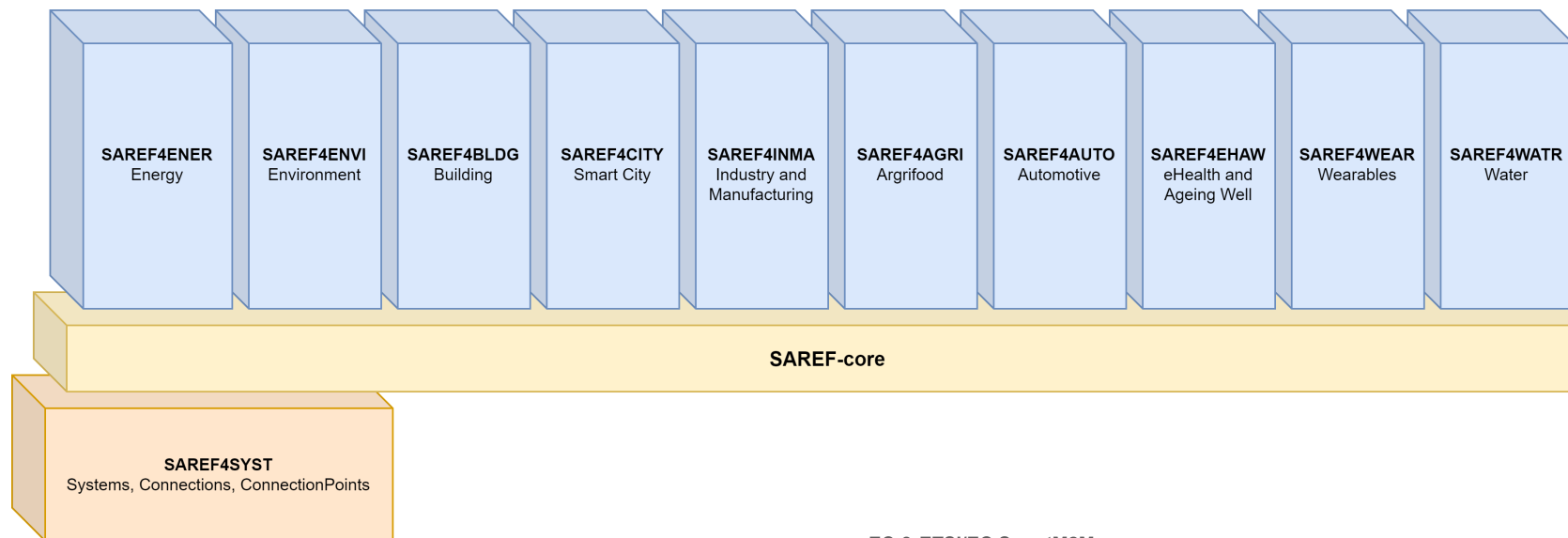


Des patrons d'ontologies

Extensions

Ontologie noyau

Patrons

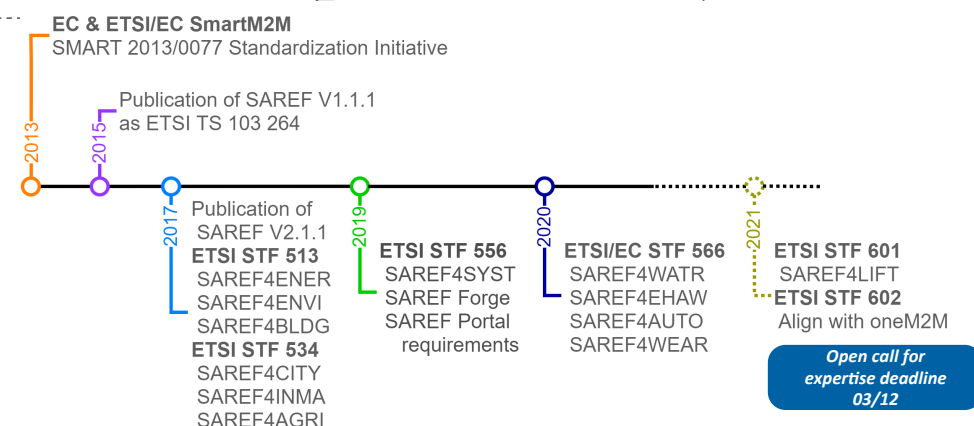
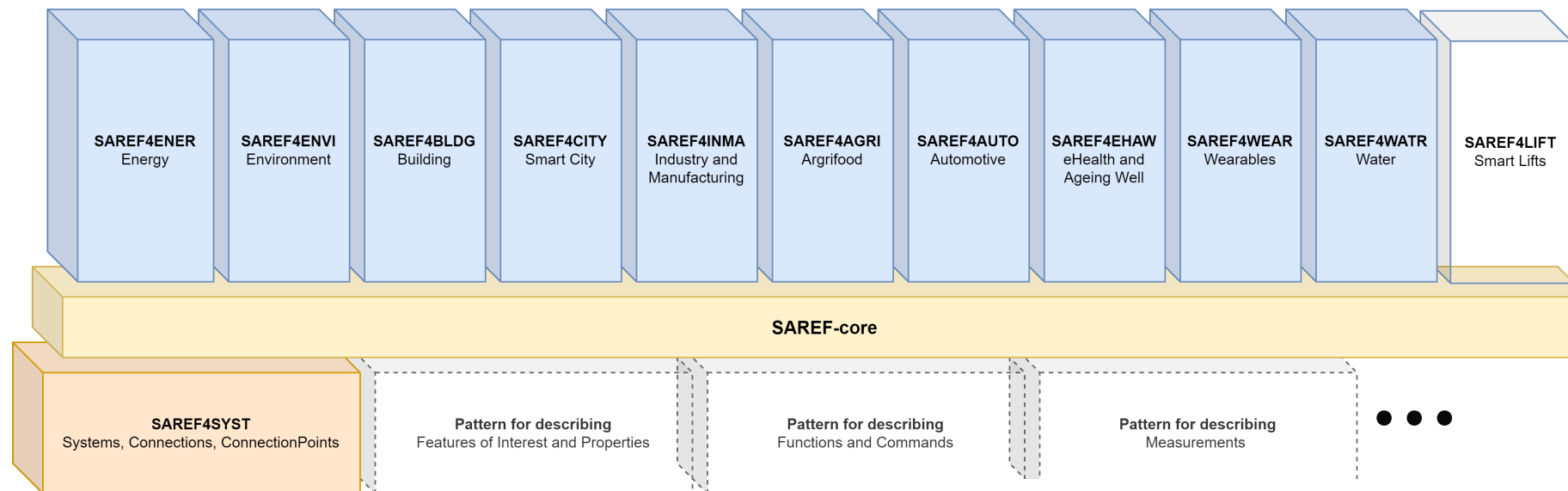


Développement ouvert à contributions

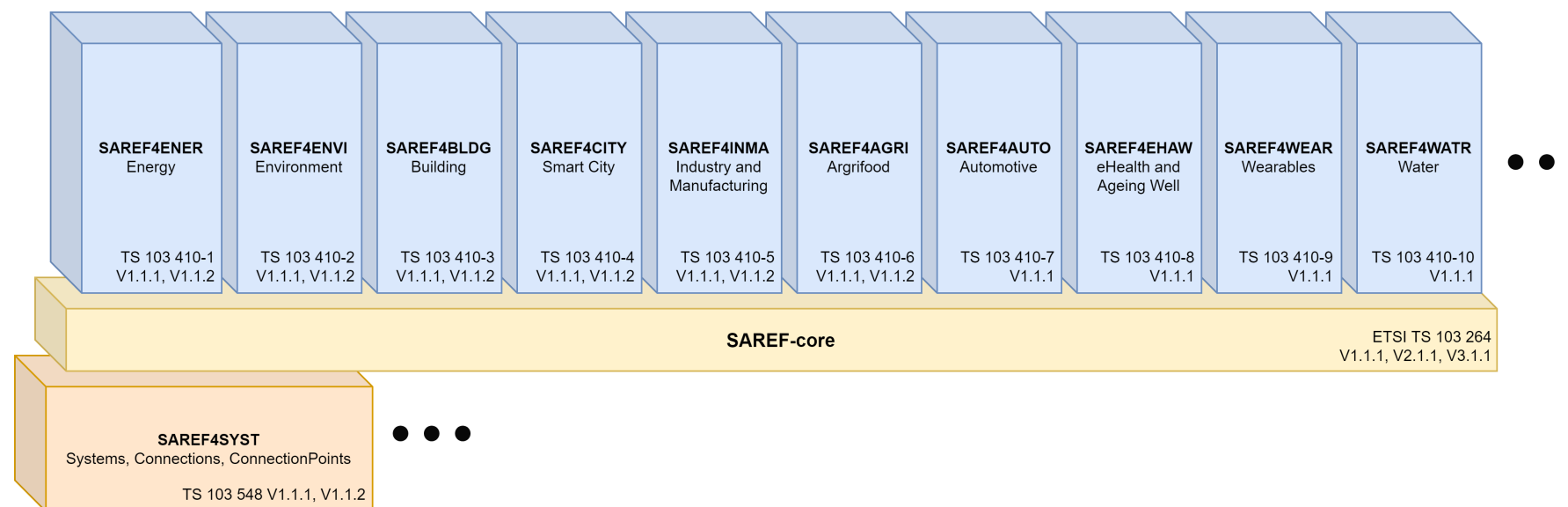
Extensions

Ontologie noyau

Patrons



Ensemble d'ontologies versionnées (version = *projet SAREF*)



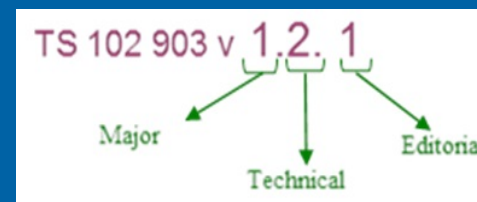
TR = Technical Report

Cas d'utilisation et Besoins

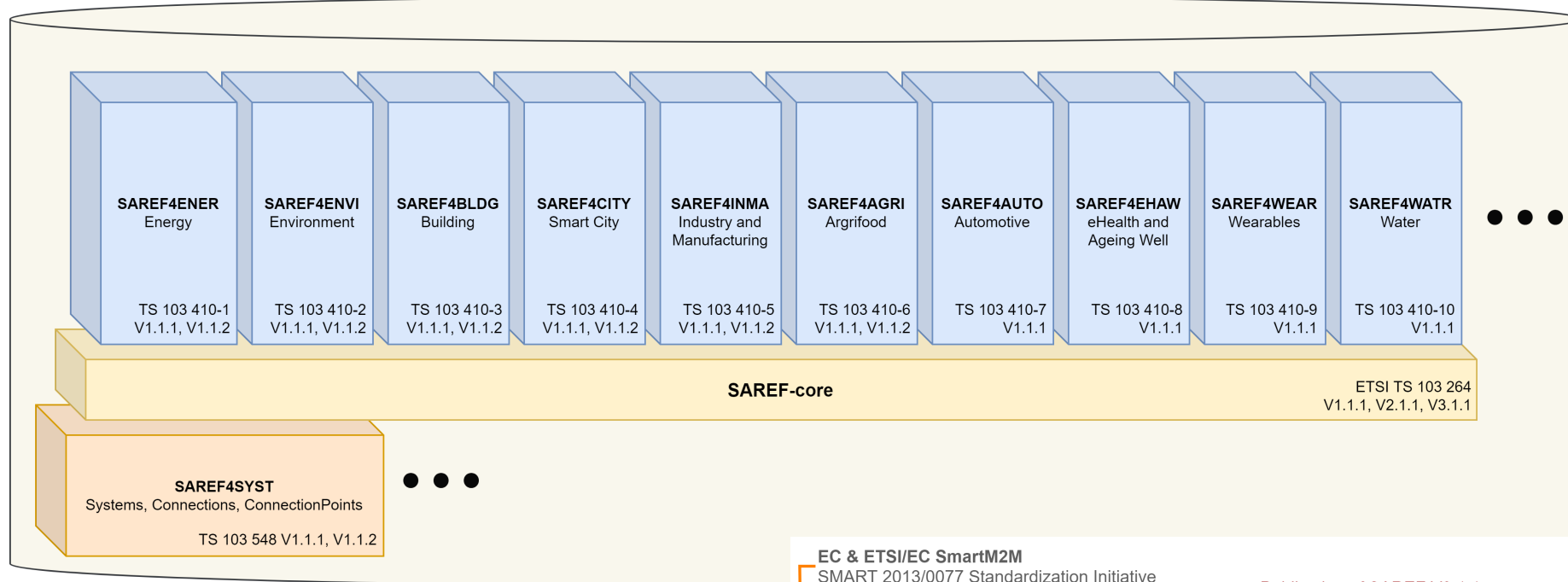
TS = Technical Specification

Specification, exemples, alignements

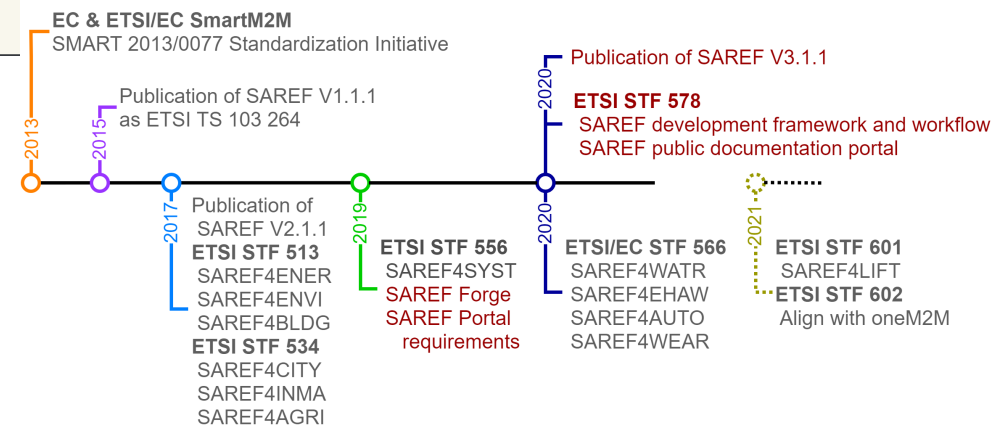
Des documents versionnés



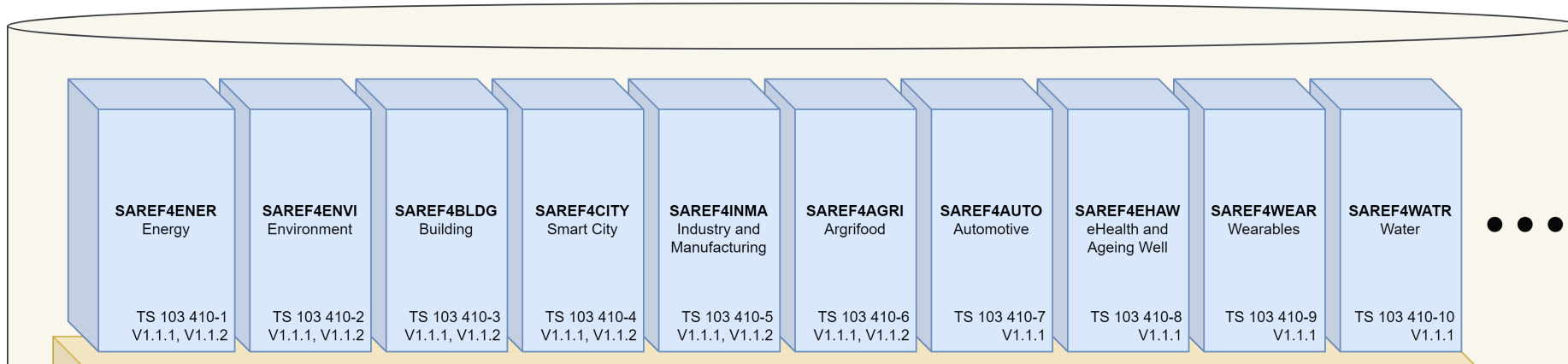
STF 556 - Consolidation of SAREF and its community of users, based on the experience of ITEA 12004 SEAS
 STF 578 - Specification of the SAREF development framework and workflow,
 and development of the Community SAREF Portal for user engagement



Team leader:	<ul style="list-style-type: none"> • Maxime Lefrançois, IMT - MINES Saint-Étienne, maxime.lefrancois@emse.fr
Team Members:	<ul style="list-style-type: none"> • Raúl García-Castro, UPM - Universidad Politécnica de Madrid, rgarcia@fi.upm.es • Maria Poveda Villalon, UPM - Universidad Politécnica de Madrid, mpoveda@fi.upm.es • Antoine Zimmermann, IMT - MINES Saint-Étienne, antoine.zimmermann@emse.fr • Omar Qawasmeh, IMT - MINES Saint-Étienne, omar.alqawasmeh@emse.fr • Salvador González, UPM - Universidad Politécnica de Madrid, sgonzalez@delicias.dia.fi.upm.es



Un dépôt par projet SAREF, des branches pour les versions



ETSI Projects Groups Snippets Help Sign in

- saref4wear SAREF4WEAR SAREF 1 year ago
- saref4auto SAREF4AUTO SAREF 1 year ago
- saref4ehaw SAREF4EHAW SAREF 1 year ago
- saref4agri SAREF4AGRI SAREF 1 year ago
- saref4inma SAREF4INMA SAREF 1 year ago
- saref4city SAREF4CITY SAREF 1 year ago
- saref4envi SAREF4ENVI SAREF 1 year ago
- saref4bldg SAREF4BLDG SAREF 1 year ago
- saref4ener

ETSI SAREF saref-core Details

saref-core Project ID: 298

BSD 3-clause "New" or "Revised" License 110 Commits 3 Branches 0 Tags 1.5 MB Files

SAREF Core ontology

develop-v3.1.1 saref-core / +

removed port Maxime Lefrançois authored 3 months ago

README Add CHANGELOG Add CONTRIBUTING Add Kubernetes cluster CI/CD configuration

Name	Last commit	Last update
documentation	solved #45	4 months ago
examples	Issues in Clause 9.6.4	5 months ago
ontology	solved #45	4 months ago
requirements	Issues in TS 103 673 Clause 9.3	5 months ago
tests	Issues in TS 103 673 Clause 9.6.2	5 months ago
.gitignore	Issues in TS 103 673 Clause 9.2	5 months ago
.gitlab-ci.yml	removed port	3 months ago
LICENSE	Add LICENSE	1 year ago
README.md	test	4 months ago

ETSI SAREF saref-core Repository Branches

Overview Active Stale All Filter by branch name Delete merged branches New branch

Protected branches can be managed in project settings.

Stale branches

- release-v3.1.1 protected 9e2f3188 Merge request 0/2 Merge request Compare
- prerelease-v3.1.1 protected 38dcb25f Merge branch 'de... 0/1 Merge request Compare
- develop-v3.1.1 default protected 3a947c1b removed port 3 months ago

ETSI TS 103 673: Specification des méthodes de travail

ETSI TS 103 673 V1.1.1 (2020-08)



**SmartM2M;
SAREF Development Framework and Workflow,
Streamlining the Development of SAREF and its Extensions**

Clause 6: Création d'une version de projet SAREF

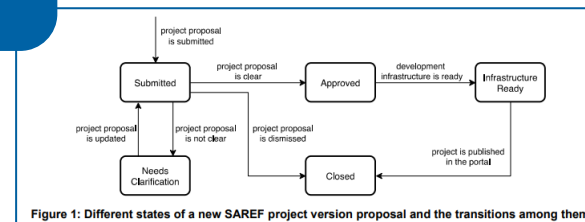


Figure 1: Different states of a new SAREF project version proposal and the transitions among them

Clause 7: Développement d'une version de projet SAREF

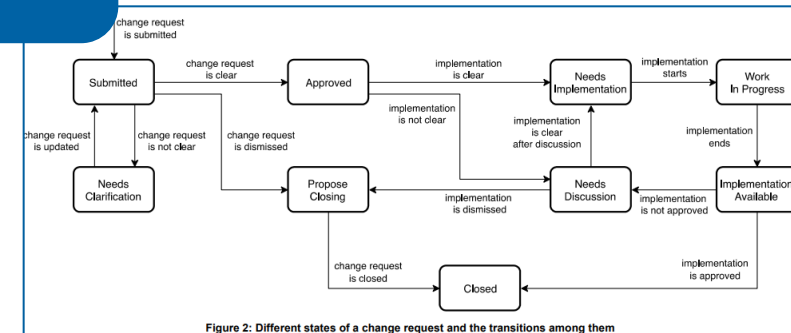


Figure 2: Different states of a change request and the transitions among them

Clause 8: Publication d'un projet SAREF

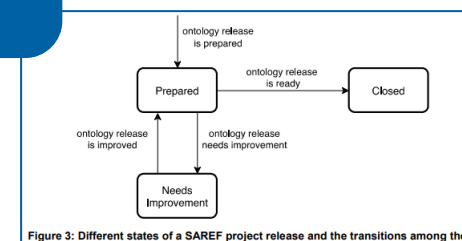
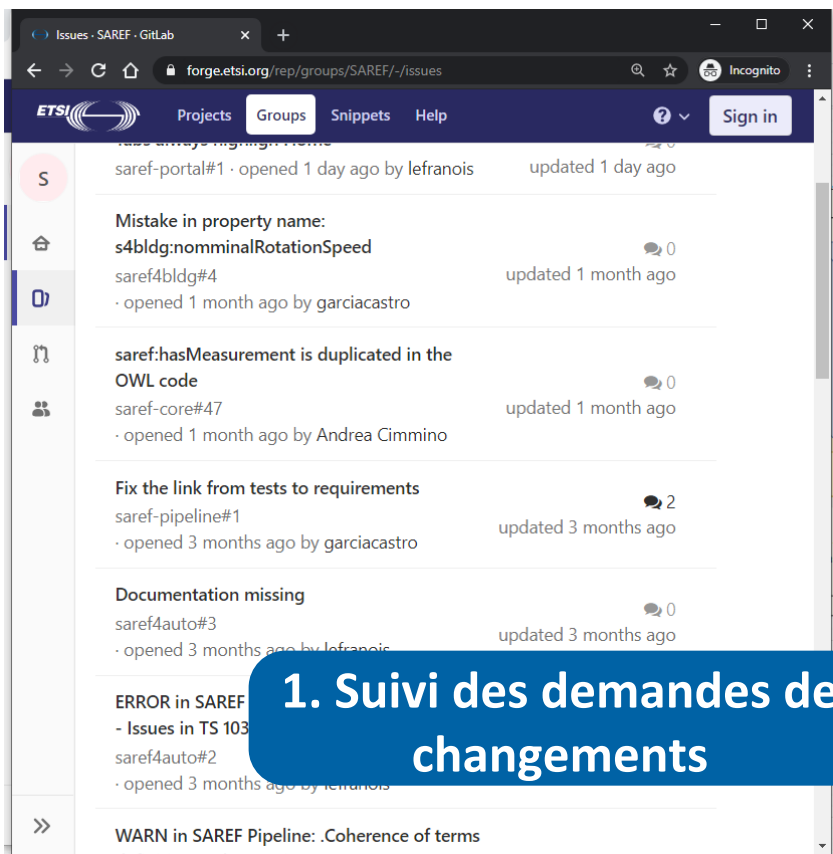


Figure 3: Different states of a SAREF project release and the transitions among them

ETSI TS 103 673: Specification des méthodes de travail



Issues - SAREF - GitLab

forge.etsi.org/rep/groups/SAREF/-/issues

ETSI Projects Groups Snippets Help Sign in

saref-portal#1 · opened 1 day ago by lefranois updated 1 day ago

Mistake in property name: s4bldg:nomminalRotationSpeed
saref4bldg#4 · opened 1 month ago by garciacastro

saref:hasMeasurement is duplicated in the OWL code
saref-core#47 · opened 1 month ago by Andrea Cimmino

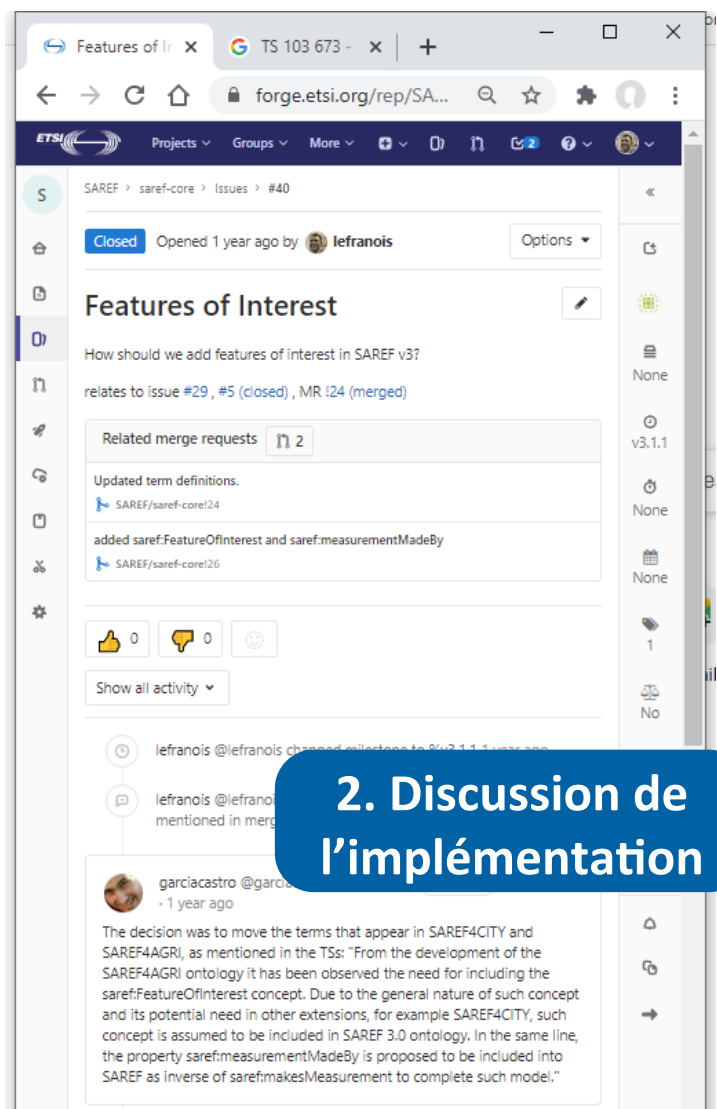
Fix the link from tests to requirements
saref-pipeline#1 · opened 3 months ago by garciacastro

Documentation missing
saref4auto#3 · opened 3 months ago by lefranois

ERROR in SAREF - Issues in TS 103
saref4auto#2 · opened 3 months ago by lefranois

WARN in SAREF Pipeline: .Coherence of terms

1. Suivi des demandes de changements



Features of Interest

Closed · Opened 1 year ago by lefranois

How should we add features of Interest in SAREF v3?
relates to issue #29, #5 (closed), MR 124 (merged)

Related merge requests 2

Updated term definitions.
SAREF/saref-core#24

added saref.FeatureOfInterest and saref.measurementMadeBy
SAREF/saref-core#26

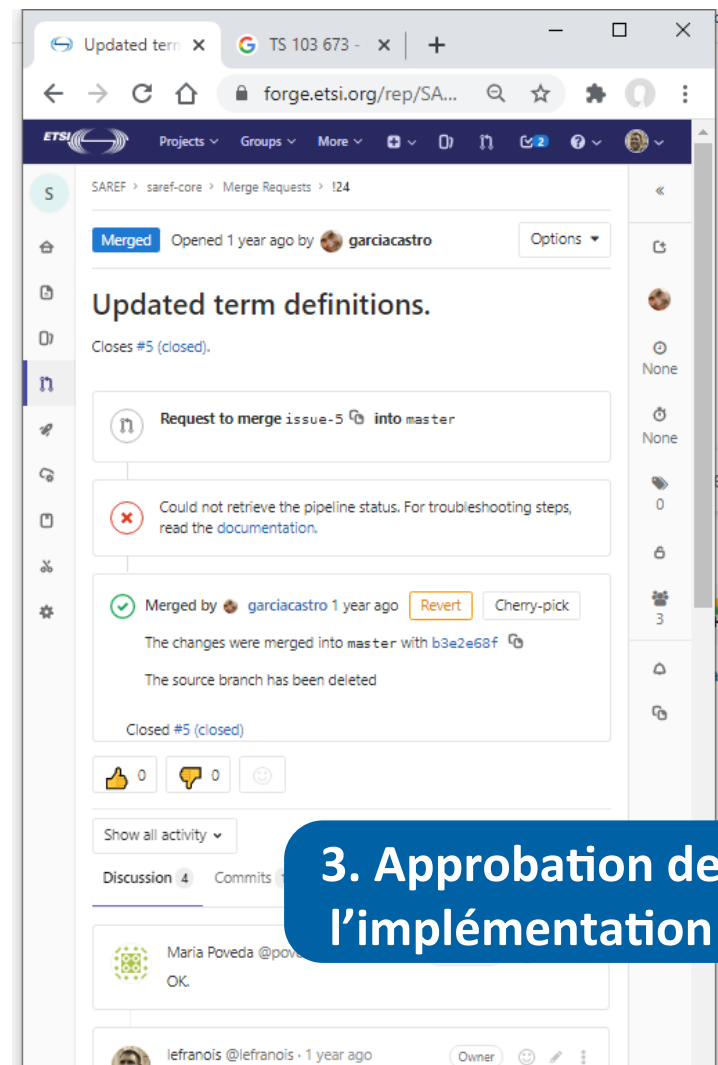
lefranois @lefranois changed milestones to 3.0/2.1.1 1 year ago

lefranois @lefranois mentioned in merge request 1 year ago

garciacastro @garciacastro · 1 year ago

The decision was to move the terms that appear in SAREF4CITY and SAREF4AGRI, as mentioned in the TSs: "From the development of the SAREF4AGRI ontology it has been observed the need for including the sarefFeatureOfInterest concept. Due to the general nature of such concept and its potential need in other extensions, for example SAREF4CITY, such concept is assumed to be included in SAREF 3.0 ontology. In the same line, the property saref:measurementMadeBy is proposed to be included into SAREF as inverse of saref:makesMeasurement to complete such model."

2. Discussion de l'implémentation



Updated term definitions.

Merged · Opened 1 year ago by garciacastro

Closes #5 (closed).

Request to merge issue-5 into master

Could not retrieve the pipeline status. For troubleshooting steps, read the documentation.

Merged by garciacastro 1 year ago

The changes were merged into master with b3e2e68f

The source branch has been deleted

Closed #5 (closed)

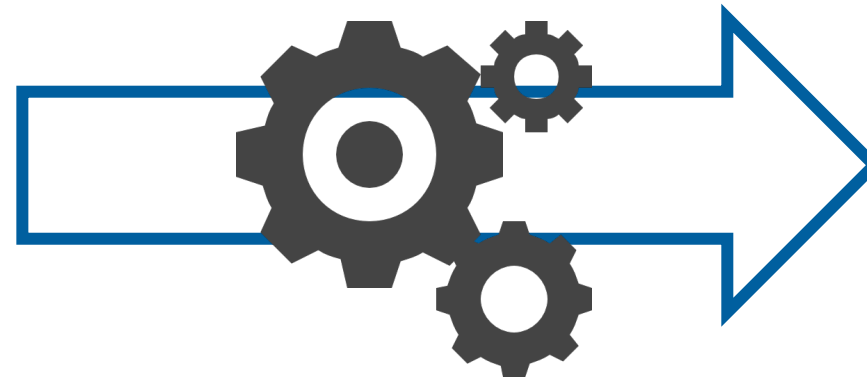
Discussion 4 Commits

Maria Poveda @poveda OK

lefranois @lefranois · 1 year ago Owner

3. Approbation de l'implémentation

SAREF-Pipeline: logiciel pour vérifier la conformité d'un projet à la Clause 9 de la spécification TS 103 673



SAREF Pipeline

<https://saref.etsi.org/sources/saref-pipeline>

Rapport de conformité

- 9.2 Structure du répertoire du projet SAREF
- 9.3 Expression des besoins
- ...
- 9.4 Spécification de l'ontologie
 - 9.4.1 Structure du répertoire
 - 9.4.2 Préfixes
 - 9.4.3 Déclaration de l'ontologie
 - 9.4.3.1 IRI de l'ontologie et de la version
 - 9.4.3.2 Métadonnées de documentation
 - 9.4.3.3 Créateurs et contributeurs
 - 9.4.4 Déclaration des termes
 - 9.4.4.1 IRI des termes
 - 9.4.4.2 Métadonnées de documentation
 - 9.4.5 Profile OWL, consistance, pas de pitfalls, satisfiabilité
- 9.5 Tests de l'ontologie
- ...
- 9.6 Exemples
- ...
- 9.7 Documentation

SAREF-Pipeline: logiciel pour vérifier la conformité d'un projet à la Clause 9 de la spécification TS 103 673



SAREF Pipeline

1. Interface graphique

↳ SAREF Pipeline

Runs the SAREF pipeline as specified in Technical Specification:
ETSI TS 103 673 V1.1.1: "SmartM2M; SAREF Development Framework and Workflow, Streamlining the Development of SAREF and its Extensions"

The SAREF pipeline is part of the SAREF Development Framework <https://portal.etsi.org/STF/STFs/STF-HomePages/STF578>
Selected directory: <C:\Users\maxime.lefrancois\Documents\Recherche\Standardisation\ETSI\test\saref4inma>

SAREF Pipeline execution in saref4inma

WARN The source repository for SAREF4INMA is not clean. Only the current version will be considered.

SAREF4INMA v1.1.2 - Issues in TS 103 673 Clause 9.4.3.1

ERROR The ontology document shall contain exactly one metadata vann:preferredNamespaceUri. The value for this metadata shall be an xsd:string literal with lexical form <https://saref.etsi.org/saref4inma/>

- : got "https://saref.etsi.org/saref4inma/"^^http://www.w3.org/2001/XMLSchema#anyURI;

SAREF4INMA v1.1.2 - Issues in TS 103 673 Clause 9.4.3.2

ERROR The ontology document shall contain exactly one metadata dct:terms:source. The value for this metadata shall be the IRI <https://saref.etsi.org/sources/saref4inma/>

- : got <https://forge.etsi.org/rep/SAREF/saref4inma>;

WARN If the SAREF project version has an associated ETSI Technical Specification document published on the ETSI Portal, then the ontology document shall contain exactly one metadata rdfs:seeAlso. The value for this metadata shall be the IRI to the corresponding ETSI Technical Specification.

- :

SAREF4INMA v1.1.2 - Issues in TS 103 673 Clause 9.4.4.2

ERROR The following terms defined in the ontology document shall have their associated metadata...

2. Select the execution mode

develop

release

portal prerelease

portal release

3. Select execution options

do not generate the website

ignore examples

do not generate the HTML pages for terms

1. Select a directory

4. Run the Pipeline

```
saref-pipeline/target$ java -jar saref-pipeline.jar
usage: java -jar saref-pipeline.jar <mode> [<options>] [<target>]

Runs the SAREF pipeline as specified in Technical Specification:
  ETSI TS 103 673 V1.1.1: "SmartM2M; SAREF Development Framework and
  Workflow, Streamlining the Development of SAREF and its
  Extensions"

<mode> can take the following values:
develop  Run the SAREF pipeline in relax mode in the target SAREF
project
release  Run the SAREF pipeline in strict mode in the target SAREF
project
prerelease-portal Operate a strict check and generate the portal for
pre-release or release branches of each source in the
configuration file `saref-repositories.yml`
release-portal Operate a strict check generate the portal for release
branches of each source in the configuration file
`saref-repositories.yml`
clean    Remove all files generated by the previous executions
help    Displays this message

<target> points to the target directory. By default, target is the current
directory.

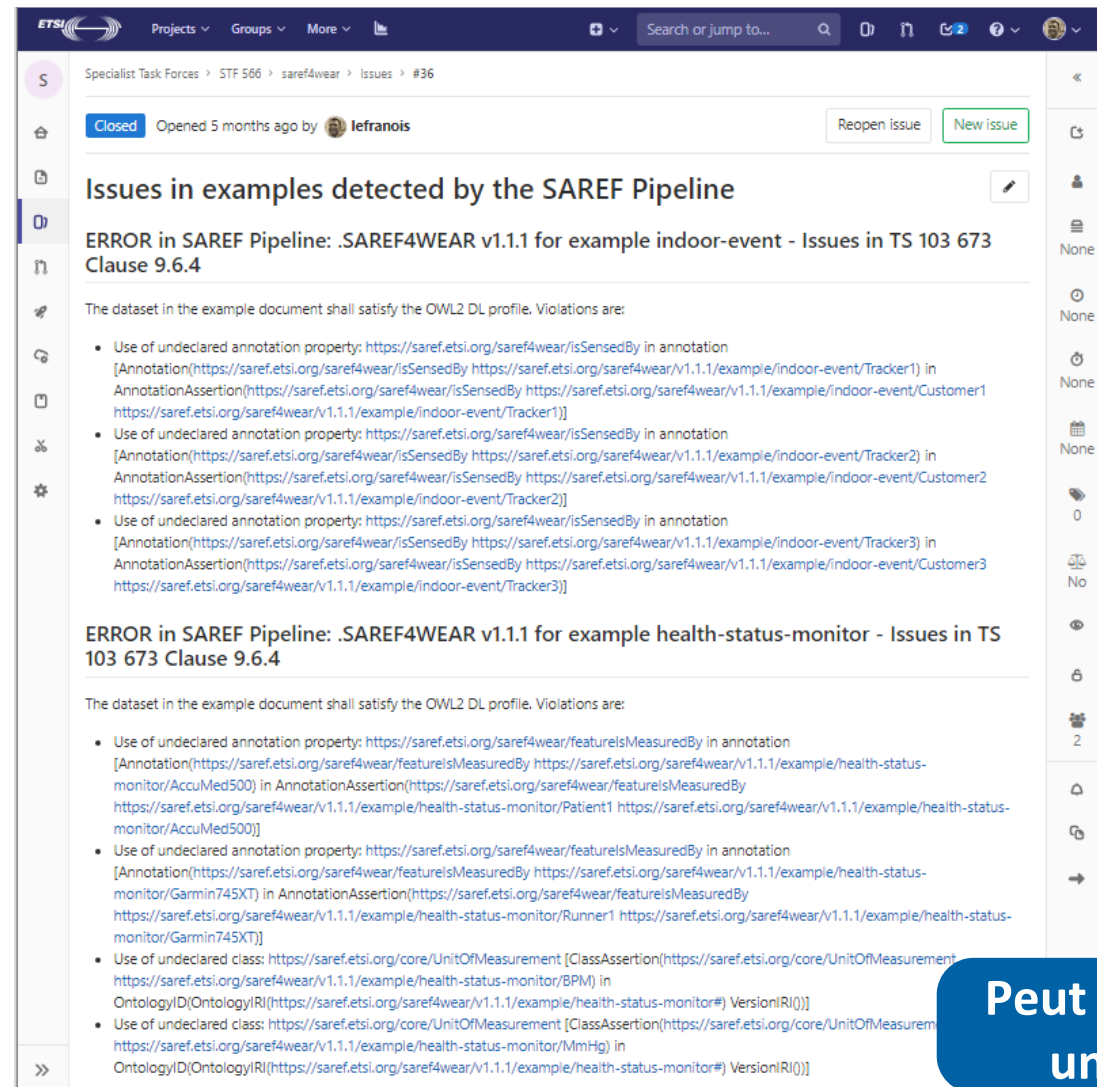
<options> can take the following values:
-e,--no-examples Do not check examples
-s,--no-site     Do not generate the website
-t,--no-terms   Do not generate
```

2. Interface en ligne de commande

SAREF-Pipeline: logiciel pour vérifier la conformité d'un projet à la Clause 9 de la spécification TS 103 673 et générer un rapport d'évaluation en markdown



SAREF Pipeline



Specialist Task Forces > STF 566 > saref4wear > Issues > #36

Closed Opened 5 months ago by lefranois Reopen issue New issue

Issues in examples detected by the SAREF Pipeline

ERROR in SAREF Pipeline: .SAREF4WEAR v1.1.1 for example indoor-event - Issues in TS 103 673 Clause 9.6.4

The dataset in the example document shall satisfy the OWL2 DL profile. Violations are:

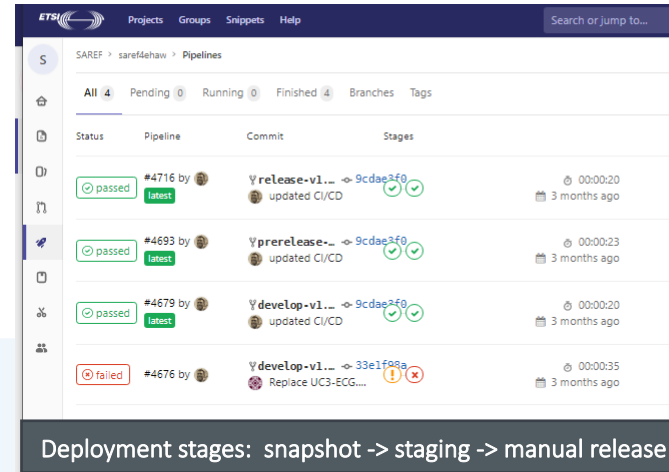
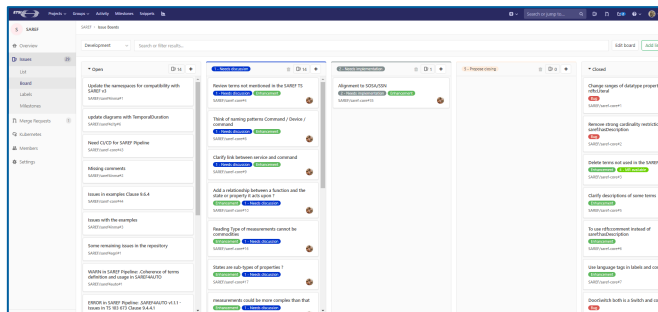
- Use of undeclared annotation property: <https://saref.etsi.org/saref4wear/isSensedBy> in annotation [Annotation(<https://saref.etsi.org/saref4wear/isSensedBy> <https://saref.etsi.org/saref4wear/v1.1.1/example/indoor-event/Tracker1>) in AnnotationAssertion(<https://saref.etsi.org/saref4wear/isSensedBy> <https://saref.etsi.org/saref4wear/v1.1.1/example/indoor-event/Customer1> <https://saref.etsi.org/saref4wear/v1.1.1/example/indoor-event/Tracker1>)]
- Use of undeclared annotation property: <https://saref.etsi.org/saref4wear/isSensedBy> in annotation [Annotation(<https://saref.etsi.org/saref4wear/isSensedBy> <https://saref.etsi.org/saref4wear/v1.1.1/example/indoor-event/Tracker2>) in AnnotationAssertion(<https://saref.etsi.org/saref4wear/isSensedBy> <https://saref.etsi.org/saref4wear/v1.1.1/example/indoor-event/Customer2> <https://saref.etsi.org/saref4wear/v1.1.1/example/indoor-event/Tracker2>)]
- Use of undeclared annotation property: <https://saref.etsi.org/saref4wear/isSensedBy> in annotation [Annotation(<https://saref.etsi.org/saref4wear/isSensedBy> <https://saref.etsi.org/saref4wear/v1.1.1/example/indoor-event/Tracker3>) in AnnotationAssertion(<https://saref.etsi.org/saref4wear/isSensedBy> <https://saref.etsi.org/saref4wear/v1.1.1/example/indoor-event/Customer3> <https://saref.etsi.org/saref4wear/v1.1.1/example/indoor-event/Tracker3>)]

ERROR in SAREF Pipeline: .SAREF4WEAR v1.1.1 for example health-status-monitor - Issues in TS 103 673 Clause 9.6.4

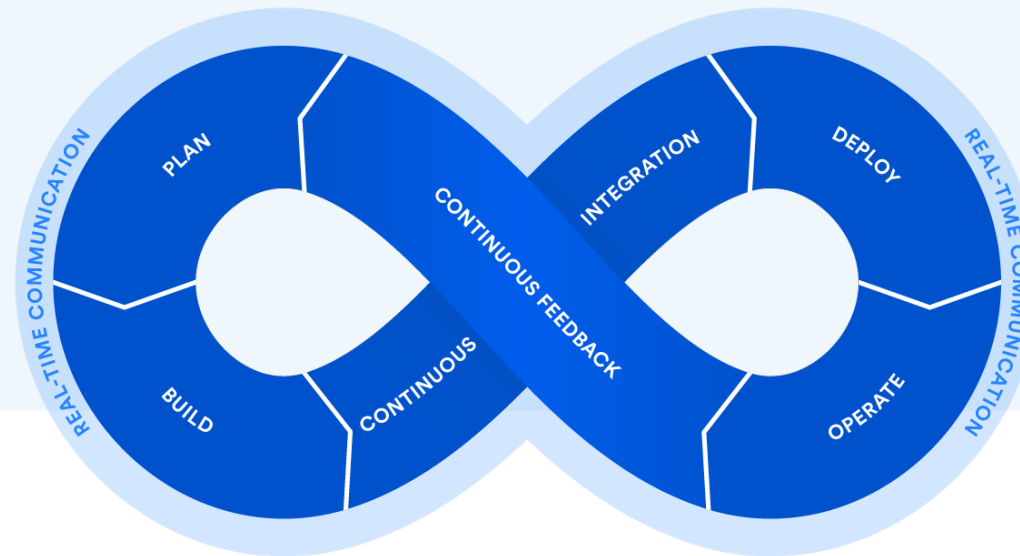
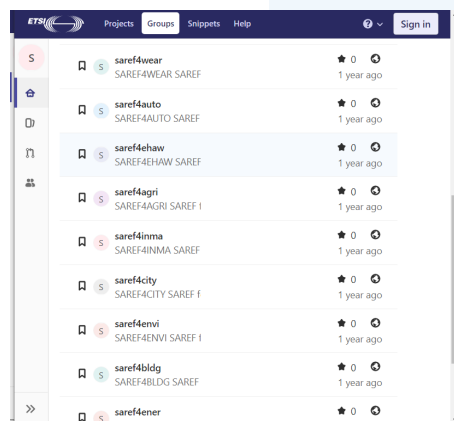
The dataset in the example document shall satisfy the OWL2 DL profile. Violations are:

- Use of undeclared annotation property: <https://saref.etsi.org/saref4wear/featuresIsMeasuredBy> in annotation [Annotation(<https://saref.etsi.org/saref4wear/featuresIsMeasuredBy> <https://saref.etsi.org/saref4wear/v1.1.1/example/health-status-monitor/AccuMed500>) in AnnotationAssertion(<https://saref.etsi.org/saref4wear/featuresIsMeasuredBy> <https://saref.etsi.org/saref4wear/v1.1.1/example/health-status-monitor/Patient1> <https://saref.etsi.org/saref4wear/v1.1.1/example/health-status-monitor/AccuMed500>)]
- Use of undeclared annotation property: <https://saref.etsi.org/saref4wear/featuresIsMeasuredBy> in annotation [Annotation(<https://saref.etsi.org/saref4wear/featuresIsMeasuredBy> <https://saref.etsi.org/saref4wear/v1.1.1/example/health-status-monitor/Garmin745XT>) in AnnotationAssertion(<https://saref.etsi.org/saref4wear/featuresIsMeasuredBy> <https://saref.etsi.org/saref4wear/v1.1.1/example/health-status-monitor/Runner1> <https://saref.etsi.org/saref4wear/v1.1.1/example/health-status-monitor/Garmin745XT>)]
- Use of undeclared class: <https://saref.etsi.org/core/UnitOfMeasurement> [ClassAssertion(<https://saref.etsi.org/core/UnitOfMeasurement> <https://saref.etsi.org/saref4wear/v1.1.1/example/health-status-monitor/BPM>) in OntologyID(<https://saref.etsi.org/saref4wear/v1.1.1/example/health-status-monitor/>VersionIRI())]
- Use of undeclared class: <https://saref.etsi.org/core/UnitOfMeasurement> [ClassAssertion(<https://saref.etsi.org/core/UnitOfMeasurement> <https://saref.etsi.org/saref4wear/v1.1.1/example/health-status-monitor/MmHg>) in OntologyID(<https://saref.etsi.org/saref4wear/v1.1.1/example/health-status-monitor/>VersionIRI())]

Mise au point d'une pratique DevOps pour SAREF



<https://saref.etsi.org/>



- 🌐 Une ontologie de référence en Europe pour l'IoT, avec pour ambition de contribuer à la transformation numérique de l'industrie
- 🌐 Un réseau d'ontologies versionnées
- 🌐 Des patrons d'ontologies, une ontologie noyau, des extensions pour des verticales
- 🌐 Des améliorations constantes dans sa conception et son développement
- 🌐 Un développement ouvert, mais supervisé par ETSI SmartM2M
- 🌐 Des méthodes de travail bien spécifiées et outillées avec des techno DevOps
- 🌐 Un portail public de documentation en ligne <https://saref.etsi.org/>



The Standards People

Le framework de développement de l'ontologie ETSI SAREF (Smart Applications REference ontology)

Presented by: **Maxime Lefrançois**

For: SemWeb.Pro