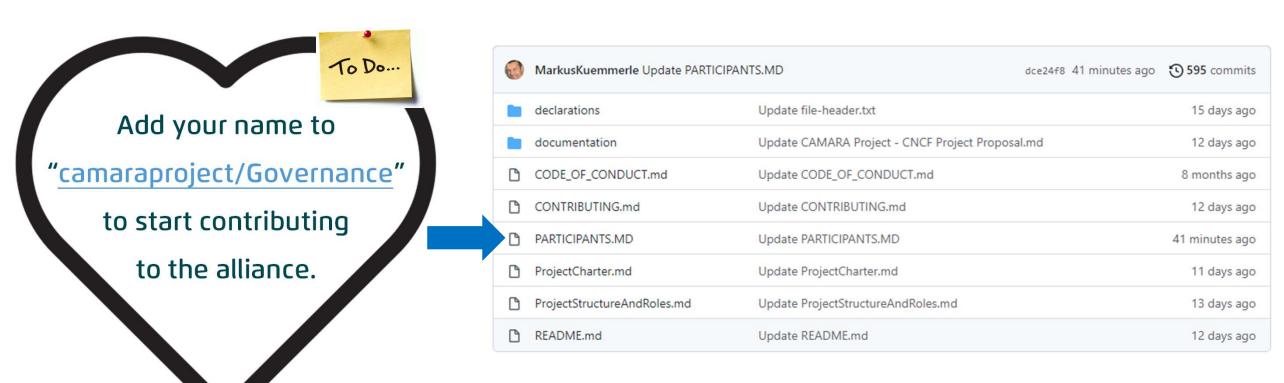


Agenda

01	Welcome new participants
02	Qorum given?
03	Decision process for new sub project
04	Proposals for API sub projects
05	Project governance updates
06	Sub project status
07	Working group status
80	AOB

Welcome new participants Public Github repository for CAMARA project



- 1. Ensure that your email address is documented in your GitHub profile so that we can add you to the mailing list
- Insert your name in the PARTICIPANTS.MD file and create a GitHub pull request

Quorum given? Yes

5GFF	Janine Grasso (Miguel Carames, Kevin Smith)	~
AT&T	Wiley Wilkins (Barry Elia)	~
Capgemini	Shamik Mishra	/
Deutsche Telekom AG	Nathan Rader (Markus Kümmerle)	/
Ericsson	Bart van Kaathoven (Jan Friman)	~
Google Cloud	Sridhar Gollapudi	*
GSMA	Henry Calvert	/
IBM	Jason Hunt (Zyg Lozinski)	/
Intel	Petar Torre	/
Kandy	Philip Lintell (Ralph Page)	/
KDDI	Toshiyasu Wakayama	/
Microsoft	Landon Cox	/
Nokia	Tanja de Groot (Chris Jones)	~
ORANGE	Sylvain Morel	/
Scenera	David Lee	/
T-Mobile US	Lyle Bertz	/
TIM	Roberto Procopio (Fabrizio Moggio)	~
Telefonica	Juan Carlos Garcia (Jose A Ordonez Lucena)	/
TELUS	Ali Tizghadam (Shalin Hudda)	/
Vodafone	Steven Pater (Johanna Wood)	~

Decision process for new sub projects

José Antonio Ordóñez Lucena (Telefonica)

Voted and Decided

Steering Committee voted and decided to approve the process. Quorum given, no votes against.

Motivation

Problem statement

- Decision on creating new Sub Projects to work out specific APIs has not been a major issue up to now.
 - Every API was more than welcome and new Sub Project was defined accordingly
 - The reason is that the number of APIs and contributions in CAMARA have been rather limited so far.
- However, as CAMARA gains traction and more partners are bringing API proposals into the backlog, the as-is approach is no longer viable – it does not scale.
- Additionally, external fora are asking us about the formal procedure to start working on a new API in CAMARA

Call for action

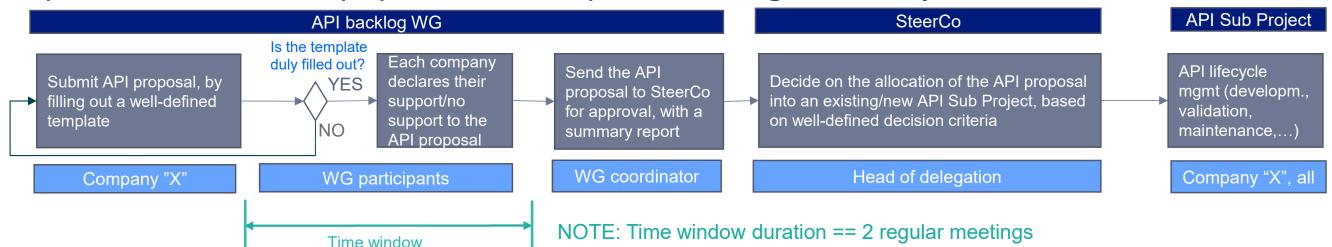
 Agree on (and document) a clear, consistent transparent process for API onboarding and handling, that allows tracking the situation of APIs from their introduction in the backlog to their final incorporation to the CAMARA portfolio as technically/commercially available.

Note

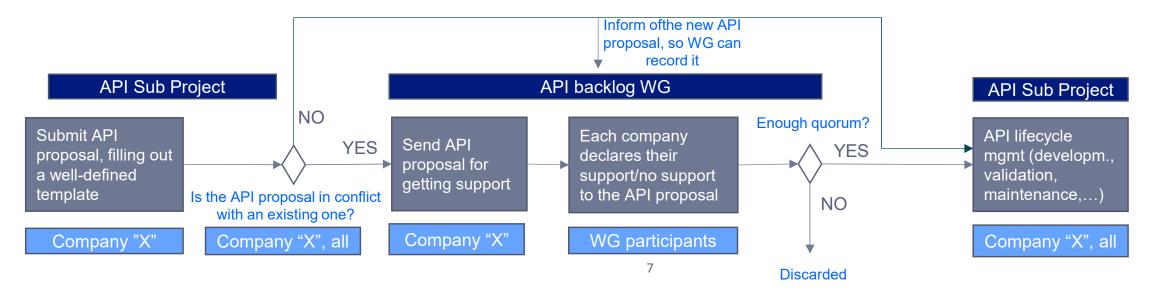
• The intention is not making the process more complicated or slow it down, but add certainty and transparency, and hopefully speed it up and gain scale (grow quickly the API portfolio) by growing confidence in the participants.

Pipeline

Option A (default): the API proposal is out of scope of an existing API Sub Project

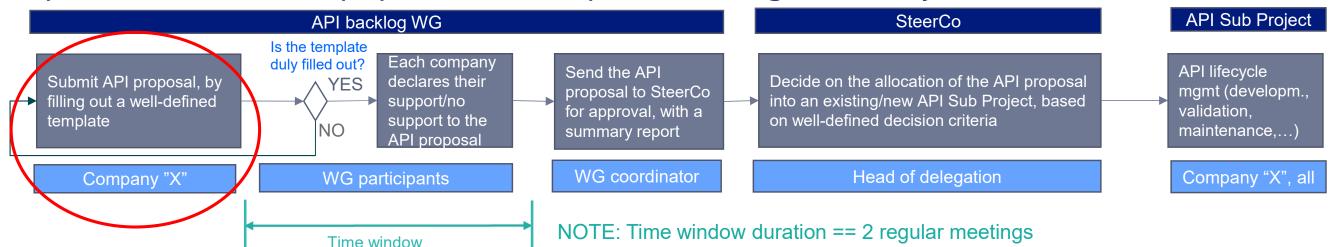


Option B (shortcut): the API proposal is in scope of an existing API Sub Project

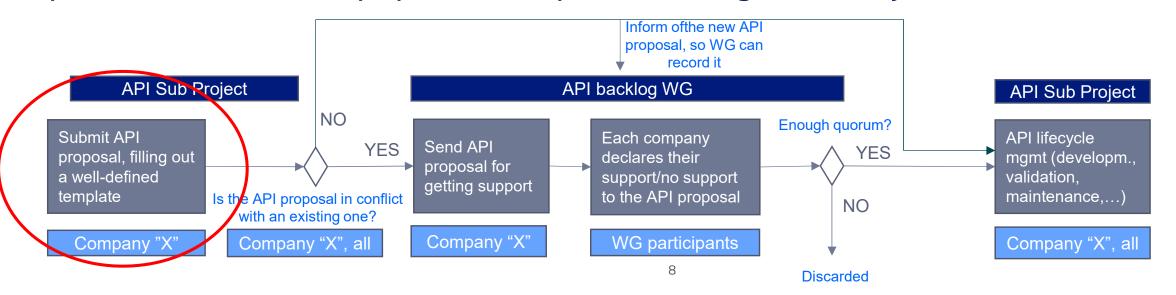


1. API proposal template

Option A (default): the API proposal is out of scope of an existing API Sub Project



Option B (shortcut): the API proposal is in scope of an existing API Sub Project



1. API proposal template

- This template captures all the information that a partner should fill out when proposing a new API (or API family) to CAMARA.
- This template will be used as checklist to decide on including/not including the API proposal in the backlog.
- Upload this template into "API backlog /TBD" directory, with this filename: APIproposal_<APIname>_<owner>.md

Fields	Description
API proposal name	API proposal name
API proposal owner	Company "X"
API summary	High level description of API objective, and 2/3 examples of in-scope business cases
Technical viability	Identify the underlying network/cloud capabilities which are needed for the support of CAMARA API, relating these capabilities them to standards maturity. Example: this API requires the availability of NEF with this Rel-15 "X" feature.
Commercial viability	Specify the availability of commercial (or industrialized open-source) solutions for the identified network/cloud capabilities.
YAML code available?	YES / NO.
Validated in lab/production env?	YES / NO. If YES, specify if it was lab network or production network.
Validated with real customers?	YES / NO. If YES, specify how many customers participated in the evaluation , and their use cases.
Validated with operators?	YES / NO. If YES, specify which operators participated in the evaluation.

2. Summary report to be sent out to the SteerCo

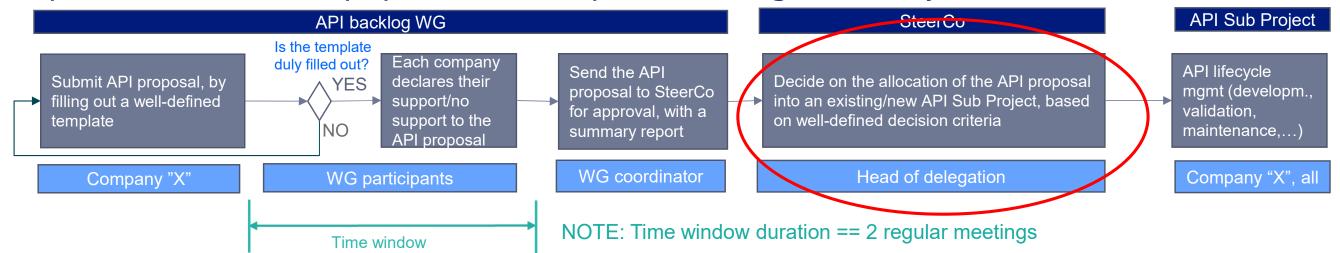


- After Time Window, the **API backlog coordinator sends a summary report** to the TSC mailing list at **least 1 week prior to the SteerCo meeting** where the API proposal will be voted upon.
- Summary report structure.

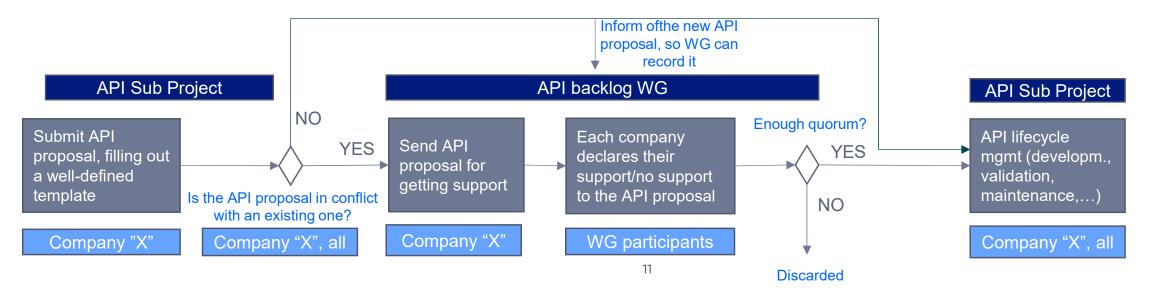
Fields	Description				
API proposal name	API proposal r	API proposal name			
API proposal owner	Company "X"				
API proposal registration date	YYYY/MM/DD				
API proposal supporters	Specify the companies that support the API proposal				
Checklist (YES/NO)	Technically Commercially YAML code Validated in Validated with viable? Validated with operators?				

3. Guidelines for the SteerCo to make decisions on an API proposal

Option A (default): the API proposal is out of scope of an existing API Sub Project



Option B (shortcut): the API proposal is in scope of an existing API Sub Project



3. Guidelines for the SteerCo to make decisions on an API proposal

- Upon receiving the summary report and notification from the API backlog coordinator, SteerCo will study the proposal and vote it on the next SteerCo meeting.
- Decision options
 - No-Go! (>50% companies VOTE NO) -> objecting companies shall provide justifications why.
 - Go! (<=50% companies VOTE NO) -> SteerCo shall specify whether the API proposal is to be hosted by a new or existing Sub Project.

Main tenets for SteerCo decision

- Tenet #1: Open-source projects are contribution-driven. There should no be guidelines to prevent partners to contribute.
 - o If a partner/customer/OPAG would like to contribute a certain API (which is on priority "X" in the backlog, not necessarily priority 1), they should be welcomed to do it.
- Tenet #2: SteerCo shall make sure that APIs belonging together (close topic/content, API families) are developed within the same Sub Project, while ensuring that Sub Projects are not too small (i.e., difficult to track them down) or too big (difficult to be managed).
- Tenet #3 There could be situations where API proposal complies with acceptance criteria (template duly filled out), but has not supporters other than the proponent company. What to do in this situation? Recommendation is to accept the API proposal, and sees how successful will be in terms of industry adoption.

4. API backlog maintenance

- Once a partner/customer/OPAG submits the API proposal with the filled-in template, a new entry is added to "API backlog.md".
- API backlog.md file structure.

API proposal name	API proposal owner	Market value (customer priority) & technical feasibility	API proposal registration date	Status	API proposal supporters	Link to the filled-in template
Name 1	Company "X"	NOTE 1	YYYY/MM/DD	NOTE 2	Company "A", "B"	NOTE 3
Name 2	Company "A"	NOTE 1	YYYY/MM/DD	NOTE 2	Company "C"	NOTE 3
Name N	OPAG	NOTE 1	YYYY/MM/DD	NOTE 2	Company "A", "B",	NOTE 3

NOTE 1: Options -> {"short-term"; "medium-term"; "long term"}. This is to be decided by API backlog WG participants NOTE 2: Options -> {"Not submitted and no subproject exists"; "Not submitted but subproject exists"; "Submitted"; "Under evaluation"; "Ready for SteerCo decision"}

NOTE 3: URL where the filled-in template for API proposal has been submitted. If no URL is specified, it is assumed that no submission has been done yet; in such a case, the API is captured in the backlog for guidance/reference for future submissions.



Connectivity as a Service
Path engineering APIs

TELUS Ali Tizghadam
June 2022

Presented by Ali and decided to bring it to SteerCo according to the new approval process. See decision above.

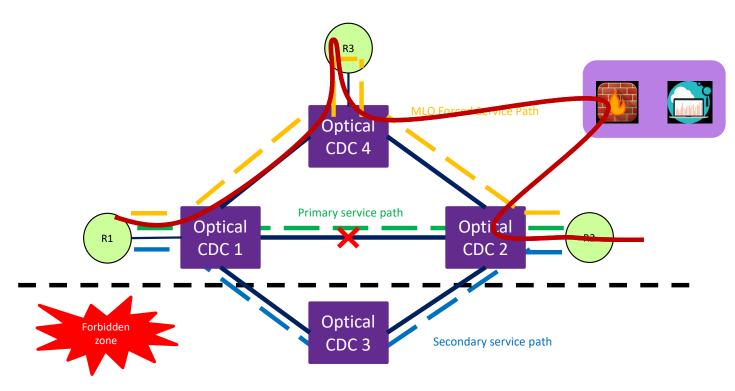


Initial motivation: Sovereignty Routing as a Service

Intent

- Find routes to meet performance objectives subject to the condition that the traffic should not route through forbidden zone
- In general VNF (say vFW) may need to be chained (customer control on traffic)

- Plan "P" API(s)
 - to decide best multilayer route options
- Execute "E" API(s)
 - Appropriate multilayer deployment policies
- Monitor "M" API(s)
 - Inventory and health check



Connectivity (Path Engineering) as a Service (CaaS)

- (Path) connectivity service (Plan "P" API, as well as Execute "E" and Monitor "M")
 - Atomic: offer best connectivity (path) option between two end-points
 - Composite: between a group of end-points (virtual network)
 - SLO driven
 - Availability
 - Latency
 - Throughput
 - Sovereign
 - Include / exclude specific objects such as nodes / links with given attributes etc
 - ACL rules
 - ...
 - May imply
 - Primary, secondary, tertiary paths
 - Disjoint-ness: link-disjoint, node-disjoint

APIs

- Network APIs to offer connectivity
 - Rich enough connectivity (path) attributes / objectives
 - Range of performance metrics
 - Health monitor APIs (KPI)
 - Life cycle management APIs (plan, create, activate, modify, retire)
- Shall be agnostic to technology / vendor / operator
 - Proper abstracted interfaces to operator level network

- Offer best connectivity solution or all possible options
 - The latter requires exposing abstract network view via APIs
- Leverage existing work
 - ONF TAPI
 - IETF
- Alignment with network slice APIs



the future is friendly®

Project governance updates CAMARA logo



New Logos (black / white edition) can be downloaded here:

https://github.com/camaraproject/WorkingGroups/tree/main/MWC/documentation/Mark etingMaterial

Project governance updates CAMARA marketing and website



LF will implement first version of the website based on existing information / documents.

- Website has to be maintained
- Onepager and Presentation has to be maintained

tion activities have to be **MWC 2023)**

Proposa.

- Reactivate former MWC Working Group
- Change name to "Marketing"
- Include steering committee participants (default) or named representatives

Steering Committee Decision required.

Project governance updates CAMARA mailing list

A mailing list for CAMARA is now implemented. Please accept the invitation! 100 Down



□ Toshi Wakayama若山

☐ Sheikh Saad

A Home Mod

Admin -

In a second step then we are able to create additional lists for the steering committee, and

one for each sub project and each working group.

From: Group Notification <all+invite+3548748

Invitation will be renewed in the next days, please accept so that we can use Date: Tuesday, July 5, 2022 at 12:45 1 III.

To: Rader, Nathan < Nathan.Rader@telekom

To: Rader, Nathan < Nathan.Rader@telekom

To: Rader, Nathan to join the all@lists.

The mailing lists asap

Hello,

You have been invited by Markus Kuemmerle to join the Camara Project group all@lists.camaraproject.org

If you have questions about this invitation, send them to all-towner@lists.camaraproject.org.

To accept the invitation, please reply to this email, or you may accept the invitation on the website. This link will expire in 14 days, on 07/19/2022 at 10:48am UTC.

If you are not interested, or if Nathan.Rader@telekom.de is not your email address, please ignore this email.

The Camara Project Team

Project governance updates Contributors, Maintainers, Codeowners

Not discussed due to lack of time Postponed to next SteerCo

Maintainers:

- a small group which is acting as Sub Project Managers
- listed in the MAINTAINERS.MD of the Sub Project

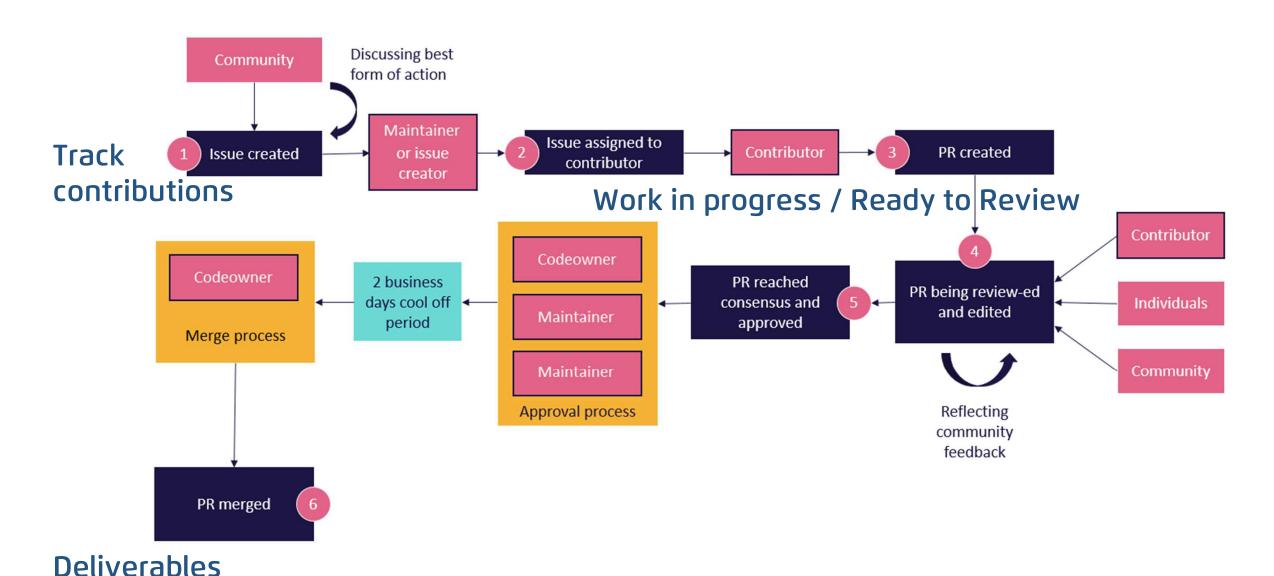
Codeowners:

- a small group responsible for merging code / documents / PRs
- listed in the CODEOWNERS of the Sub Project (also technical readable file!)

Contributors:

- the whole community for a Sub Project able to contribute (e.g. review)
- listed as Contributors in GitHub (admin has to invite, persons have to confirm)

Project governance updates Contributing, Branching, Pull Requests, Reviews & Artefact Status



Sub project status "Quality on Demand"

GitHub issue #7

Scope:

- Service APIs for "Quality on Demand" (see APIBacklog.md)
- It provides the customer with the ability to:
 - set quality for a mobile connection (e.g., required latency, jitter, bit rate)
 - get notification if network cannot fulfill
 - NOTE: The scope of this API family should be limited (at least at a first stage) to 4G an
- Specify, develop, document and test the APIs (with 1-2 Telcos)
- Schedule: from now to 31.12.2022
- Location: virtually

Team / Maintainers:

- DT: Shilpa Padgaonkar, Herbert Damker, N. Wirzius, F. Dsouza
- Intel: Petar Torre, Francesc Guim
- Telefonica: José Antonio Ordonez Lucena
- Telus: Ali Tizghadam
- Ericsson: Emil Zhang, Jan Friman, Joachim Dahlgren
- KDDI: Toshi Wakayama
- Orange: Sylvain Morel, Patrice Conil, Julien Giannandrea
- Vodafone: Eric Murray, Kevin Smith, Ivan Nieto
- BT : Milan Lalovic (OPAG observer)

GitHub issue #20

GitHub issue #26

GitHub issue #27

GitHub issue #29

GitHub issue #13

GitHub issue #22

GitHub issue #23

GitHub issue #31

GitHub issue #32

GitHub issue #33

GitHub issue #34

GitHub issue #36

Repository (incl. first draft API specs): https://github.com/camaraproject/QualityOnDemand

Sub project status "Quality on Demand"

Deliverable	Required/Optional (R/O)	Current status
API Definition	R	Done, pull request with version reset to 0.1.0 needs review Some issues under discussion
API doc/user stories/testcases	R	3 Pull requests for User Story + 2 API's doc under review Comments from two reviewers, mostly addressed
Implementation	R	Implementation code for API version 0.1.0 contributed (PR #28) Reviews needed
API Reviews and extensions		Several discussions regarding • UE identification (also issue in Commonalities) • IP address and port ranges • Parameters ProtocolIn/ProtocolOut • Stateless design Issues ready to be addressed • Ensure secure handling of callback URL • Consistent usage of notificationUri vs notificationUrl

Sub project status "Edge Cloud"

GitHub issue #14







GitHub issue #30

GitHub issue #31

Scope:

- Service APIs for "Edge Cloud" (see APIBacklog.md)
- A (family of) APIs providing the customer with the ability to:
 - Onboard and manage application images to be deployed on resources within the operator network.
 - Use reserved compute resources within the operator network for the deployment of applications on VMs or containers
 - NOTE: The scope of this API family should be limited (at least in the short term) to 4G and 5G.
- Describe, develop, document and test the APIs (with 1-2 Telcos)
- Schedule: from now to 31.12.2022
- Location: virtually (Tue, 16-17 CET/CEST)

Team / Maintainers:

- Broadpeak: Tuan Tran, Christoph Neuman
- Capgemini: Deepak Gunjal
- DT: Yamina Kelm, Shilpa Padgaonkar
- GSMA: Tom Van Pelt, Mark Cornall
- Intel: Larry Horner
- KDDI: Toshi Wakayama
- MSFT: Landon Cox
- EdgeXR: Thomas Vits

- Nabstract: Babu
- Orange: Alexandru Ciinaru, Sylvian Morain
- Scenera: Andrew Wajs
- TEF: Aure Martinez, Alex Harmand, Jose Ordonez
- TIM: Fabrizio Moggio, Marco Signorelli, Raffaele P.
- VF: Eric Murray
- 5GFF: Kevin, Senthoor, Brett, Syed, Mashesh, Raghuram

Sub project status "Edge Cloud"

API contributions so far

API	Owner	YAML available?
MEC exposure and experience management API		.,
Simple edge discovery API	5GFF	Y
Application Artifacts Management API		
Application Provider Resource Management API	OPAG	Y
Application Onboarding Management API		
Application Instance Lifecycle Management API		
Code of former MobiledgeX	EdgeXR	Y

Next steps

- Looking for synergies and touchpoints between APIs, avoid redundancy / overlappings
- Elaborate on user stories following 'user story template' agreed in Commonalities WG.

GitHub issue #2

Sub project status "Device Status"

Scope:

- Service APIs for "Device Status" (see APIBacklog.md)
- It provides the customer with the ability to:
 - · check if a device is losing connection to the network or gets reachable again, and the roaming status.
 - NOTE: The scope of this API family should be limited (at least at a first stage) to 4G and 5G.
- Describe, develop, document and test the APIs (with 1-2 Telcos)
- Started: July 2022
- Location: virtually

Team / Maintainers:

- DT: N. Wirzius
- Orange: Sylvain Morel
- Telefonica: Jose A Ordonez Lucena
- Vodafone: Eric Murray, Kevin Smith

Repository (incl. first draft API specs): https://github.com/camaraproject/DeviceStatus

Sub project status "Device Location"

Scope:

- Service APIs for "Device Location" (see APIBacklog.md)
- It provides the customer with the ability to:
 - check the location of a device.
 - NOTE: The scope of this API family should be limited (at least at a first stage) to 4G and 5G.
- Describe, develop, document and test the APIs (with 1-2 Telcos)
- Started: July 2022
- Location: virtually

Team / Maintainers:

- DT: N. Wirzius
- Orange: Sylvain Morel
- Telefonica: Jose A Ordonez Lucena
- Vodafone: Kevin Smith

Repository (incl. first draft API specs): https://github.com/camaraproject/DeviceLocation

Working group status "Commonalities for APIs"

Scope:

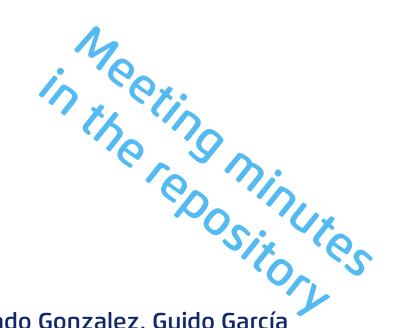
- Work out "Commonalities for APIs"
- Schedule: from now to end of 2022
- Location: virtually

Team / Contributors:

- DT: Shilpa Padgaonkar, Mariusz Sozanski
- Telefonica: Jose Ordonez-Lucena, Ruben Barrado Gonzalez, Guido García
- Intel: Petar Torre, Francesc Guim
- Ericsson: Jan Friman, Miguel A. García-Martín
- KDDI: Toshi Wakayama
- Orange: Sylvain Morel, Olivier Mathieu
- TIM: Fabrizio Moggio
- Vodafone: Kevin Smith, Eric Murray, Ivan Nieto
- AT&T: Shahram Mohajeri
- GSMA: Faisal Zia, Tom van Pelt, Mark Cornall
- Accenture: Adriano Poloni, Giuseppe Di Nuccio
- Broadpeak: Christoph Neumann

Repository

https://github.com/camaraproject/WorkingGroups/tree/main/Commonalities



GitHub issue #32

GitHub issue #4

GitHub issue #53

GitHub issue #57

GitHub issue #60

GitHub issue #59

GitHub issue #61 GitHub

issue #63

GitHub issue #64

Working group status "Commonalities for APIs"

Deliverable	Format	Main Contributor	Current status
GPSI external identifier doc	Markdown	Ericsson	In review
User consent documentation	Markdown	Telefonica	In review
API readiness minimum criteria checklist	Markdown	DT	In review
General principles doc (Incl. software engineering process)	PDF => Markdown	Telefónica All	Update in progress
Camara API summary doc template	Markdown	DT	In review
Process to onboard APIs	Markdown	Telefonica	Update in progress

Working group status "API Backlog"

Scope:

- Defining and maintaining the list of APIs to be developed in CAMARA
 - Any API proposal is internally discussed and assessed, according to well-defined criteria
 - A report is sent out to the SteerCo, which takes it into consideration for deciding whether this API proposal is to be worked out in CAMARA or not, and how.
- Schedule: from now to 31.12.2022

Team / Contributors

- / Contributors
 eutsche Telekom: Noel Wirzius, Shilpa
 ricsson: Jan Friman, Miguel Garcia
 (DDI: Toshi Wakayama, Yusuke
 Scenera: Andrew Wajs
 Telefonica: Jose Ordonez-Lucena, Rubén Barrado González, Diego González
 Vordafone: Kevin Smith, Eric Murray, Ivan Nieto

Repository

https://github.com/camaraproject/ WorkingGroups/tree/main/APIBacklog



GitHub issue #12



GitHu issue #20



GitHub issue #29



GitHu issue #43

GitHub

issue #45

GitHub

issue #48



Working group status "API backlog"

APIs in discussion

API	Owner	Github Issue
Request Network Status Traffic API	Scenera	#29
Device Identifier API	Vodafone	#44
Anonymised Subscriber Identifier API	Vodafone	#45
Device & Traffic Prioritization in WiFi API	TEF	#48

