

IETF-3GPP coordination

IETF 122

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Manager to IETF)

Agenda



- Welcome, [notetakers](#), agenda bash
- Liaison statements
- Dependencies
- RFC 3113 update
- Technology deep dive recap
- 3GPP 6G workshop
- AoB

Liaison statements

SA5 -> NETMOD

LS on need for modeling isInvariant and SystemCreated in YANG
(2023/03/09)

3GPP Requirements

- Solution to represent isInvariant and SystemCreated properties in YANG statements
- View [draft-ma-netmod-immutable-flag](#) as a potential solution

Discussed in NETMOD at IETF 117 – IETF 121

- WG adoption poll for [draft-ma-netmod-immutable-flag-08](#) completed with mixed opinions
- Compromise reached to address requirements without negative impact to YANG architecture
- Defines a way to formally document the immutability of system-provided nodes using a YANG metadata annotation called "immutable"
- [draft-ietf-netmod-immutable-flag](#), -02 posted 2024-09-27, WGLC completed

SA3 and RAN3 -> TSVWG



- Reply LS on DTLS for SCTP (2023/08/21) from SA3
- Reply LS on DTLS for SCTP next steps and request for input (2023/08/30) from RAN 3
- Both in response to [DTLS for SCTP next steps and request for input \(2023/08/04\)](#)
 - TSVWG lists architectural and security requirements TSVWG has taken into consideration towards developing a solution and asks if interpretation of requirements is correct, if 3GPP has preference or feedback on proposed solutions, and encourages participation in [interim TSVWG meeting \(2023/09/19\)](#).
- Feedback from SA3:
 - TSVWG's interpretation of security requirements is correct - they are generic best-practice properties of a security protocol.
 - Solution (ii) preferred because it appears to have lower implementation effort
- Feedback from RAN3:
 - RAN3 does not want to limit the maximum message size of application protocols. For this reason, any solution with a limit on message size will not meet RAN3 requirements. SCTP implementations are not discussed in RAN3
- TSVWG design team to set requirements for DTLS/SCTP
 - Established design goals and security requirements to scope the new specification
 - LS will be sent once a solution has been identified and specified in enough detail to be reviewed

SA2 -> MASQUE

- 🌿 LS on XRM metadata exchange between 3GPP Core and an Application server
(2024/09/05)
 - SA2 requested feedback on aspects of the solution related to Client Connection ID (CID) detection and registration, given the somewhat different deployment model than what is assumed in [draft-ietf-masque-quic-proxy](#), “QUIC-Aware Proxying Using HTTP”.
- 🌿 Replv LS on XRM metadata exchange between 3GPP Core and an Application server
(2024/11/11)
 - Whilst WG Chairs appreciate the interest in the views of the MASQUE WG, for future questions of this nature, they recommend writing via email to the MASQUE public mailing list (masque@ietf.org).
 - WG opinions on the questions posed captured at: <https://mailarchive.ietf.org/arch/msg/masque/QFDTHi3YWHbJQLyqhkD8PVV0PKE/>

DETNET -> RAN2, RAN3, SA2, SA3



LS on draft-ietf-raw-technologies, "Reliable and Available Wireless Technologies"

(2024/11/07)

- Draft explores suitability of short and middle range radio technologies to provide a DETNET RAW service
 - Technologies studied include Wi-Fi 6/7, Time Slotted Channel Hopping (TSCH), 3GPP 5G, and L-band Digital Aeronautical Communications System (LDACS)
 - Section 6 includes a brief overview of 5G, including system architecture, radio, scheduling, QoS, and Time-Sensitive Communication features.
 - DetNet asks for feedback, particularly on this section.
- LS scheduled for SA2, SA3, and RAN3 meetings in Orlando and was noted.
- LS scheduled for RAN2 meeting in Athens and was noted.

OPSAWG -> SA5 and CT4

LS on Internet-Draft: “Export of GTP-U Information in IP Flow Information Export (IPFIX)”

(2025-01-13)


- The draft specifies IPFIX Information Elements (IEs) that can be used to export information contained in the GTP-U header.
- The WG aims to publish this Internet-Draft as a proposed standard RFC soon.
- The WG kindly asks SA5 and CT4 to review and provide comments.
- The WG mailing list, <https://www.ietf.org/mailman/listinfo/opsawg>, is the most effective and expedient way of exchanging information, answering questions, and clarifying concerns.

SA5 and CT4 noted the LS in their February meeting

- During the discussion, delegates were asked to provide feedback, if any, on the IETF mailing list

Dependencies

Published RFCs

-  Messaging Use Cases and Extensions for Secure Telephone Identity Revisited (STIR), [RFC 9475](#)
 - Was draft-ietf-stir-messaging
 - Published 2023-12-19
 - Next steps: CRs to 33.127
 - 17.15.0 updated references section but not the actual references within document
 - 18.10.0 updated references section but not the actual references within document

Published RFCs

Deterministic Networking (DetNet) YANG Data Model, [RFC 9633](#)

- Was [draft-ietf-detnet-yang](#)
- Published 2024-10-28
- Next step: CRs to 23.501, 23.503 and 29.565 (29.565 done)

Published RFCs

Instant Message Disposition Notification (IMDN), [RFC 5438](#)

- Was draft-ietf-simple-imdn
- Published 2009-02

Next step:

- CR to 23.204, updated references section but not the actual references within document

Drafts in RFC Editor queue

[draft-ietf-stir-passport-rcd](#)

- Title: PASSporT Extension for Rich Call Data
- Last update: draft-ietf-stir-passport-rcd-26, posted 2023/06/05
- RFC editor state: MISSREF ([draft-ietf-sipcore-callinfo-rcd](#))
 - Good progress leading into IETF 122
 - draft-ietf-sipcore-callinfo-rcd-15 posted 2025-02-25, addressing comments from IESG review
- Next steps: RFC publication, CRs to 33.127 and 33.128

Drafts in RFC Editor queue

[draft-ietf-opsawg-teas-attachment-circuit](#)

- Title: YANG Data Models for 'Attachment Circuits'-as-a-Service (ACaaS)
- Status: Was draft-boro-opsawg-teas-attachment-circuit
- draft-ietf-opsawg-teas-attachment-circuit-20 addressed IESG review comments
- In RFC editor queue as of 2025-02-13.
- Next steps: RFC publication, SA5 CR to 28.541

Drafts in IESG review

[draft-ietf-tsvwg-udp-options](#)

- Title: Transport Options for UDP
- Status: draft-ietf-tsvwg-udp-options-43 posted 2025-03-15 addressing IESG feedback
- Next steps: RFC publication, SA2 CR to 23.501, CT3 CR to 29.561, CT4 CR to 29.244

Drafts in IESG review

[draft-ietf-sipcore-callinfo-rcd](#)

- Title: SIP Call-Info Parameters for Rich Call Data
- Good progress leading into IETF 122
- draft-ietf-sipcore-callinfo-rcd-15 posted 2025-02-25, addressing comments from IESG review
- Next steps: RFC publication, SA2 CR to 23.228

Active WG documents

[draft-ietf-quic-multipath](#)

- Title: Multipath Extension for QUIC
- Status: WG document, draft-ietf-quic-multipath-13 posted 2025-03-03
- Next step: WG review, IESG review, RFC publication, SA2 CR to 23.501, CT1 CR to 24.193, SA3 CR to 33.501

[draft-ietf-mimi-content](#)

- Title: More Instant Messaging Interoperability (MIMI) message content
- Status: WG document, draft-ietf-mimi-content-06 posted 2025-02-28
- Next step: WG review, IESG review, RFC publication, SA4 CR to

Active WG documents

draft-ietf-sipcore-rfc7976bis

- Title: Update to P-Visited-Network-ID in SIP Requests and Responses
- Was draft-jesske-update-p-visited-network
- Agreement to handle within SIPCORE at IETF 116 coordination meeting
- Additional WGLC held, draft-sipcore-rfc7976bis-03 posted 2024-07-23 addressing comments
- Renamed to draft-ietf-sipcore-rfc7976bis-00, posted 2024-08-20
- draft-ietf-sipcore-rfc7976bis-03 posted 2025-02-09
- Next steps: WG review, IESG review, RFC publication, CT1 CR to 24.229

Active WG documents

[draft-ietf-moq-transport](#)

- Title: Media over QUIC Transport
- Status: WG document, draft-ietf-moq-transport-10 posted 2025-03-03
- New consensus call completes 2025-04-02
- Next steps: WG review, IESG review, RFC publication, SA2 CR to 23.501, CT4 CRs to 29.571, 29.244

Active WG documents

draft-ietf-masque-connect-ethernet

- Title: Proxying Ethernet in HTTP
- Like IP proxying in HTTP, but for Layer 2 instead of Layer 3
- Status: draft-ietf-masque-connect-ethernet-06 posted 2025-01-27
 - Expected to start WGLC soon
- Next steps: WGLC, IESG review, RFC publication, SA2 CR to 23.501, CT1 CR to 24.193

Active WG documents



[draft-ietf-masque-quic-proxy](#)

- Title: QUIC-Aware Proxying Using HTTP
- Status: draft-ietf-masque-quic-proxy-05 posted 2025-03-03
- Next steps: WGLC, IESG review, RFC publication, SA2 CR to 23.501, CT4 CR to 29.244

New IETF WGs

- Shared via IETF report at SA Plenary last week
 - Digital Emblems (diem)
 - Getting Ready for Energy-Efficient Networking (green)
 - Heuristics and Algorithms to Prioritize Protocol Deployments (happy)
 - Taking IP To Other Planets (tiptop)
- Corrected list
 - RESTful Provisioning Protocol ([rpp](#)) in ART
 - Update to IANA Considerations ([ianabis](#)) in GEN
 - Taking IP to Other Planets ([tiptop](#)) in INT
 - Heuristics and Algorithms to Prioritize Protocol deployment ([happy](#)) in WIT
 - AI Preferences ([aipref](#)) in WIT

RFC 3113 Update

- Discussed status of RFC 3113 at IAB-IESG retreat before IETF 120
- Chose the following path forward:
 - Update RFC3113 to contain high-level description of collaboration (e.g., 3GPP-IETF coordination team)
 - Remove references to technology and org structure items that may change frequently
 - Move details of collaboration to a Wiki
- Initial version posted to Datatracker
 - <https://datatracker.ietf.org/doc/draft-kes-rfc3113bis/>

3GPP technology deep dive (TDD)

- 3GPP 5G architecture from IETF routing perspective
- Thursday 08:00 – 09:15, Wicklow Hall 2B
- Abstract
 - 3GPP specifications cover cellular telecommunications technologies and provide a complete system description for mobile communication, including radio access, core network, and service capabilities. These specifications also provide hooks for non-radio access to the core network and for interworking with non-3GPP networks. IETF defined protocols and technologies are used extensively by 3GPP. The technical deep dive focuses on 3GPP core networking from an IETF routing area perspective. A brief overview of 3GPP structure and working procedures is provided as well.
- Agenda
 - Intro to 3GPP (15 min, Charles)
 - 3GPP 5G architecture from IETF routing perspective (30-45 min, Jeffrey)
 - Moderated panel-discussion (15-30 min, Brian)

3GPP 6G workshop

3GPP 6G workshop, 10-11 March 2025



- Oversubscribed and capped at 750 delegates, 243 contributions
- Goal was information sharing of views for 6G from various stakeholders, including operators, vendors, industry consortia, governments, etc.
- No decision power
- Chair's summary captured in [6GWS-250243](#)

General Disclaimer



- The Chairs' summary is based on a compilation of input papers submitted for the 3GPP workshop on 6G.
- It is not an exhaustive record of all views expressed, or proposals submitted in the input contributions, nor does it reflect a consensus views among 3GPP members.
- This summary does not imply any prioritization or ranking of 6G technical areas.
- The scope of work within 3GPP is determined by its established working procedures, and there is no assurance that all the potential technical areas mentioned will be pursued as part of 3GPP studies in Release 20.

6G Motivation (Why 6G?)

Highlighting added for this presentation



Support for New Services and Use Cases

- Enabling new services and use cases beyond traditional communication, such as integrated sensing and communication (ISAC), XR/immersive communication, and AI-based services - Compute.

Revenue Growth and Monetization

- Creating new revenue streams by monetizing network capabilities and supporting diverse applications across industries.

AI and Automation

- Implementing AI-native networks for automation, optimization, and improved efficiency in network management and resource allocation.

Energy Efficiency and Sustainability

- Reducing energy consumption and promoting environmental sustainability through energy-saving features in network design and AI-driven

Spectrum Efficiency

- Utilizing spectrum efficiently, including dynamic spectrum sharing and exploring new spectrum bands.

Ubiquitous Coverage

- Seamlessly integrating terrestrial and non-terrestrial networks (NTN) for ubiquitous coverage and resilient services.

Total Cost of Ownership (TCO) Reduction

- Reducing capital expenditure (CAPEX) and operational expenditure (OPEX) through simplified network operations and improved energy efficiency.

Improved Service Reliability and Customer Experience

- Enhancing service reliability, resiliency, and insights for improved customer experience.

Network Simplification

6G Goals

Highlighting added for this presentation



☛ Sustainability

- Focus on environmental, social, and economic sustainability. This includes energy efficiency, reduced resource consumption, and contributing to global emissions targets.

☛ Resilience

- Designing networks that are robust and can withstand various events, including operational errors, heavy traffic, and disasters.

☛ Security

- Increased security, integrity, and privacy are required from day one, incorporating zero trust principles and post-quantum security measures.

☛ Customer Experience

- Improved end-user/customer experience through seamless, ubiquitous connectivity, ensuring reliable, high-quality services delivery. Optimized Quality of Experience (QoE) across diverse devices and network conditions.

☛ Efficiency

- Cost reduction via simplified systems and operations, with AI-driven automation and optimization.

☛ Interoperability

- Promoting open/interoperable interfaces and collaboration to foster innovation and avoid market fragmentation.

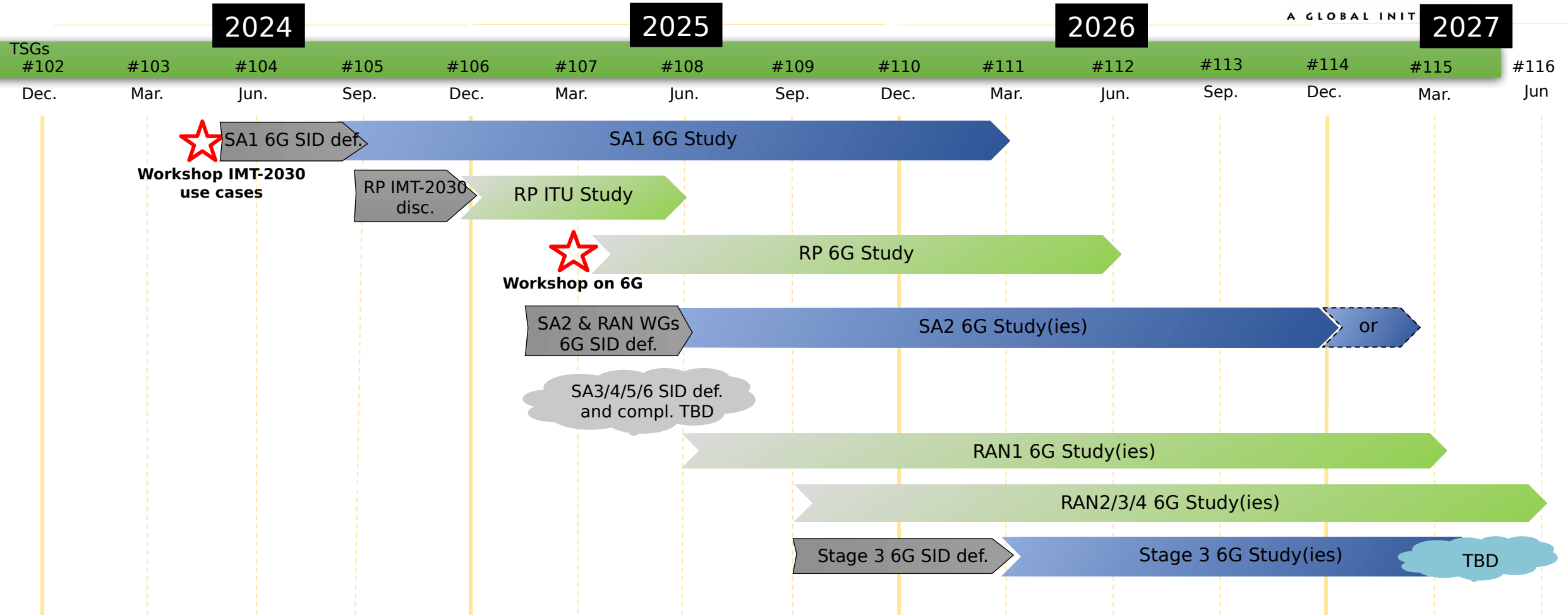
Stage-3 Protocol Aspects

This slide dropped from final report; highlighting and text in red italics added for this presentation



- 🌀 **Control Plane Protocol** evolution and study current inefficiencies at Network interfaces
 - HTTPv2 over TCP vs HTTPv3 over QUIC
 - SCTP vs QUIC
- 🌀 **User Plane Protocol** evolution to support device-network-application collaboration, distributed User Plane, and programmable user plane path.
 - RTP vs MOQ
 - GTP vs SRv6
- 🌀 **Data Protocol** to support efficient data management and transmission protocol, the coexistence of different protocols may be considered.
- 🌀 **IMS (IP Multimedia Subsystem) signaling protocol** evolution to support new services, such as multi-modality communication and agile rollout of new services, and to reduce complexity.
- 🌀 **Protocol for communication between AI agents** to improve the interaction efficiency of the network and resource coordination ability, and enhance the scalability and integration of the network capabilities
- 🌀 **Protocol impact to support new services** - Computing service, AI service, Sensing service, etc.

Release 20: 6G Timeline





IMT-2030 Technical Performance Requirements



Requirements, evaluation criteria and submission templates



Tech proposals



Workshop on technology proposals

Any Other Business

Thank You!



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