

# NMRG Virtual Meeting

## 20 January 2020

Laurent Ciavaglia, Jérôme François



# Goals of the IRTF

**The IRTF conducts research; it is not a standards development organization**

The Internet Research Task Force (IRTF) focuses on longer term research issues related to the Internet while the parallel organization, the IETF, focuses on shorter term issues of engineering and standards making.

While the IRTF can publish informational or experimental documents in the RFC series, its primary goal is to promote development of research collaboration and teamwork in exploring research issues related to Internet protocols, applications, architecture, and technology.

See “An IRTF Primer for IETF Participants” – [RFC 7418](#)

# IRTF follows IETF policy (“Note Well”)

**This is a reminder of IETF policies in effect on various topics such as patents or code of conduct.**

It is only meant to point you in the right direction. Exceptions may apply. The IETF's patent policy and the definition of an IETF "contribution" and "participation" are set forth in BCP 79; please read it carefully.

As a reminder:

- By participating in the IETF, you agree to follow IETF processes and policies.
- If you are aware that any IETF contribution is covered by patents or patent applications that are owned or controlled by you or your sponsor, you must disclose that fact, or not participate in the discussion.
- As a participant in or attendee to any IETF activity you acknowledge that written, audio, video, and photographic records of meetings may be made public.
- Personal information that you provide to IETF will be handled in accordance with the IETF Privacy Statement.
- As a participant or attendee, you agree to work respectfully with other participants; please contact the ombudsteam (<https://www.ietf.org/contact/ombudsteam/>) if you have questions or concerns about this.

Definitive information is in the documents listed below and other IETF BCPs. For advice, please talk to WG chairs or ADs:

- BCP 9 (Internet Standards Process)
- BCP 25 (Working Group processes)
- BCP 25 (Anti-Harassment Procedures)
- BCP 54 (Code of Conduct)
- BCP 78 (Copyright)
- BCP 79 (Patents, Participation)
- <https://www.ietf.org/privacy-policy/> (Privacy Policy)

# Virtual Meeting Etiquette

If you want to speak/comment:

- type 'RH' (raise hand) in the Webex chat window

Respect the line i.e. speak when it's your turn

Stay to the point, be concise and precise

# Agenda & Useful links

- Agenda

1. RG organization stuff: completed re-charter, group github (and other tools/resources), meetings 2020, survey. Hackathon project. ANRW and other announcements. (~10 min.)
2. AI for NM (~45 min.)
  - Status and development of Research Challenges in AI for Network Management document
  - Status and development of Network Management AI challenges/competitions
3. IBN (~45min.)
  - Status and development of active drafts: draft-irtf-nmrg-ibn-concepts-definitions ; draft-li-nmrg-intent-classification
  - Development of other work items: Common architectural framework ; Use cases ; Implementations (also related to the point on hackathon and resource hub)
  - **(cancelled)** "Slice management automation and SLA compliance : forerunner of an IBN-based slice exposure", Amina Boubendir. (~15min.) AoB

- Useful links

- Agenda: <https://datatracker.ietf.org/doc/agenda-interim-2020-nmrg-01-nmrg-01/>
- Materials: <https://datatracker.ietf.org/meeting/interim-2020-nmrg-01/session/nmrg>
- Webex: <https://ietf.webex.com/ietf/j.php?MTID=m51059bbf54870d49edfb798dd890f514>
- Etherpad: <https://etherpad.tools.ietf.org/p/nmrg-virtual-20200120>

# NMRG rechartering

- Final version shared on the mailing list
- Call for consensus, ends Thu., January 30<sup>th</sup>

[https://drive.google.com/open?id=12w2JTt5-y4sp8rAFwWSIP\\_dVEDgdwB1Z3dH-pvWep9o](https://drive.google.com/open?id=12w2JTt5-y4sp8rAFwWSIP_dVEDgdwB1Z3dH-pvWep9o)

# NMRG GitHub

- <https://github.com/irtf-nmrg>
- For RG documents development.  
The default tools remain the datatracker and the mailing list.
- Newly adopted draft-irtf-nmrg-ibn-concepts-definitions here:  
<https://github.com/irtf-nmrg/nmrg-ibn-concepts-definitions>
- Individual drafts related to NMRG work may also be "hosted" on the NMRG GitHub (using proper repository label). If you are willing to do so, please contact the Chairs.
- We also plan to develop the use of GitHub for Proof-of-Concepts (PoC) and tools, esp. related to IBN.

# 2020 meetings plan

- March, IETF 107, Vancouver
- April, Budapest
  - Co-located with IEEE NOMS 2020 <https://noms2020.ieee-noms.org/>
- (TBC) May, Tokyo or Rio De Janeiro
  - Co-located with iPOP 2020 or SBRC 2020
- July, IETF 108, Madrid
  - **Hackathon !**
- November, IETF 109, Bangkok
- Monthly virtual meetings
  - Next one mid-end of January – unless clear need for one in December...?
- Purpose of the meetings
  - Educate (tutorials), Inform (awareness and newcomers), NMRG meetings, scientific workshops...

# Hackathon project

- Grow IBN activity on practical aspects of with tools, PoCs...
- Target IETF 108, Madrid
- Leverage the EU location of the IETF meeting to engage EU/worldwide organizations (academia and industry), EU-funded projects and teams to take part in the hackathon.
- Build on NMRG56 meeting outcome
  - Code repository, Tool data sheet, Overall IBN tools view...
  - Tools extensions and interconnections

# ANRW 2020

- <https://irtf.org/anrw/2020/>
- Call for Papers
  - [...] New approaches to network management, operations, and control
  - **Submit your ideas!**
  - Deadline: April 10, 2020



# NMRG @ IETF 107

- Main topics of discussion: IBN + AI for NM
- Possible to have side-meetings
  - Research Challenges in AI for Network Management document
  - IBN architecture and use cases.
  - ...

# AI for NM

- Status and development of Research Challenges in AI for Network Management document
- Tentative ToC
  - I. Goals of AI in NM (could be organized by "planes" / "layers"=)
  - II. Research Challenges
    - a. Data realm
    - b. Action realm
    - c. H-N interface realm
    - d. ...
  - III. Use cases
    - a. UC#1
    - b. UC#2
  - IV. Definitions and Acronyms
  - V. References

+ incorporate outcome of IETF106 side meeting
- Volunteers to contribute

# AI for NM

- Status and development of Network Management AI challenges/competitions
  - NMRG framework document under finalization  
[https://pad.inria.fr/p/g.D1sMHS8qEcwsc2iq\\$np\\_TuYkekVkbtLyVZYr\\_netaichallenge](https://pad.inria.fr/p/g.D1sMHS8qEcwsc2iq$np_TuYkekVkbtLyVZYr_netaichallenge)
  - Volunteers to help drive the project?
  - Synchronization planned with organizers of ITU project next week (Mon. January 27<sup>th</sup>)
  - Network AI Challenge 2020  
<https://bnn.upc.edu/challenge2020>  
Albert Cabellos (acabello@ac.upc.edu)

# IBN

- Status and development of active drafts
  - ↪ Draft-irtf-nmrg-ibn-concepts-definitions-00, Intent-Based Networking - Concepts and Definitions
  - ↪ Draft-li-nmrg-intent-classification-02, Intent Classification
  - ↪ Draft-sun-nmrg-intent-framework-00, An Intent-driven Management Framework
  - ↪ ...
- 2020-03-09 (Monday): Internet Draft submission cut-off

# IBN

- Development of other work items: Common architectural framework ; Use cases ; Implementations (also related to the point on hackathon and resource hub)

# Open points/issues and next steps on IBN activity

- Improving and maturing existing drafts for RG adoption
- Engage active discussion and development on other work plan items (architecture, functionalities, validation scenarios, etc.)
  - ↪ Allocate (virtual/side) meeting time and dedicated work session
  - ↪ Progress on documentation
- Continue developing practical aspects of IBN (tools and demos, hackathon projects, etc.)
- Raising awareness and (academic) research activity level (e.g. with dedicated workshops, tutorials, position and survey papers, etc.)
- Initiate discussion on areas/topics for potential standardization work