

NMRG Virtual Meeting

23 May 2019

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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.

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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

- 05min. Short introduction of new co-chair: Jérôme.
- 05min. Status of the WG, next meetings, etc.
- 60min. Status progress on Intent Based Networking topic
 - IBN some challenges and research directions
 - Work plan refinement
- 20 min. Network AI Challenge project
 - Interest expressed from Vishnu Ram (ITU-T ML5G FG)
 - Draft framework, Jérôme & Laurent
- 15 min. Modus Operandi for virtual meetings
 - What is working well and not
 - Dedicated meeting per topic? Alternate meetings per time zone
 - Input: more proactive, only presentations or something more/different
 - Output: minutes and actions, need more?
 - How to follow-up between meetings? I-D updates, central place for work plan, progress and issue tracking, back-end / front-end
- Xx min. Any other business?

- Useful links

- Agenda: <https://datatracker.ietf.org/doc/agenda-interim-2019-nmrg-05-nmrg-01/>
- Materials: <https://datatracker.ietf.org/meeting/interim-2019-nmrg-05/session/nmrg>
- Webex: <https://ietf.webex.com/ietf/j.php?MTID=m3749c133247f0efd650133795d261af1>
- Etherpad: <https://etherpad.tools.ietf.org/p/nmrg-virtual-20190523>

RG information

- New co-chair !
 - Welcome Jérôme François, INRIA, France
- Some ongoing actions
 - Wiki overhaul and update
 - Knowledge hub / repositories, RG “front end”
 - Social media...

2019 meetings plan

- June, NMRG Workshop, San Jose, USA
 - 13-14 June 2019, Host: Nokia
 - Agenda under construction
- Virtual Meeting June-July ?
 - Early July (before ID cut-off date)
 - as follow-up to June interim and IETF105 warm-up
- July, IETF 105, Montreal
 - Regular session(s)
 - Interim meeting, Friday 26/07, ETS Montreal (under preparation)
- October, NMRG Workshop, Bologna, (under preparation)
- November, IETF 106, Singapore
- Monthly virtual meetings + topic-specific ones as per need

Status progress on Intent Based Networking

- Presentation
 - Intent-driven networks, some challenges and research directions
- Work plan refinement

IBN work plan

- **How to call stuff**
 - document(s) on terminology/taxonomy
- **How to express/model intent**
 - information model, grammar, languages
- **How to realize Intent Based Systems**
 - “reference” functional architecture, functional blocks/components, mechanisms/techniques, theory of operations/lifecycle
- **Additional work items could also investigate**
 - functions and techniques ; use cases ; what are the challenges and corresponding research items
- **Extend/Update with:**
 - Problem statement, scope, design challenges and goals
 - Concepts definition
 - Intent at design and run time, impact of CI/CD(?)
 - Interoperability
 - Continuous measure/validation of intent realization
 - Evaluation, implementation
- **Are we missing some aspects of IBN?**
- **What output will have most value/relevance?**
- **Collaboration with other communities for mutual benefits?**
 - e.g. dedicated track in conference, workshop, special issue, joint meetings, papers, demos...
 - e.g. IETF, ETSI, ONF, MEF, research communities, open source (ONAP...)

IBN work plan

- Work item 1
 - Goal:
- Work item 2
 - Goal:
- Work item 3
 - Goal:
- Work item 4
 - Goal:
- ...

- Milestones
 - M1:
 - M2:
 - M3:

Network AI Challenge

- Problem(s) to solve, use cases
- Access to data sets to work with or access to a platforms to run proposer AI solutions
- Evaluation framework(s)
- Participants,
- Description on the challenge, scope, rules, etc.
- Logistics (on-site or remote set-up, rooms, IT/network/AI/ML supporting frameworks), organizers, co-location events.
- [Sponsors/awards/some forms of recognition]
- Constraints in priority:
 1. Availability of data/platforms for tests
 2. Broadly understandable use case to attract as many as possible participants (saying in another manner, if we want to attract AI specialist, the "network" part of the challenge should be easily knowledgeable)
 3. A problem that still merits improvement in its solving, and so may have a practical impact

Network AI Challenge

- Interest? Comments?
- How to move forward?
 - Suggestion: form a team tasked to document the project
 - Cross RG/WG discussion-collaboration, other communities
- Timeline?
 - First attempt at IETF 106, Singapore, November 2019? Or another event

Virtual Meetings

- Feedback and areas for improvements
 - What is working well and not
 - Dedicated meeting per topic? Alternate meetings per time zone
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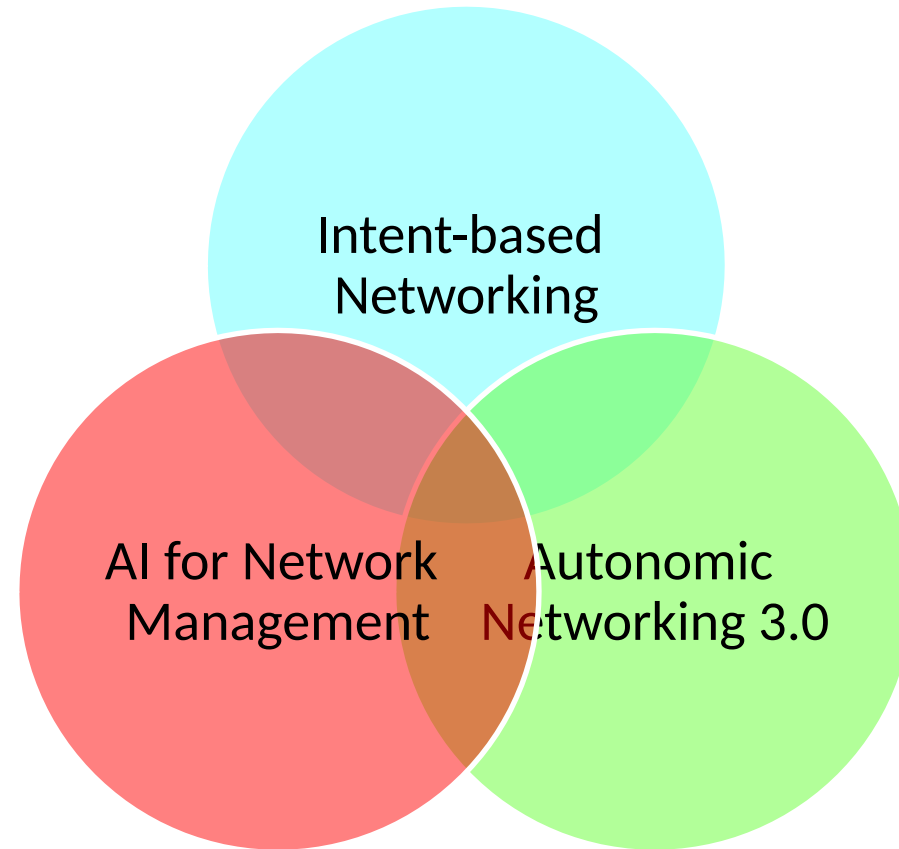
Backup slides

Intent Based Networking

- Intent Classification [draft-li-nmrg-intent-classification-00](#) (updated)
 - Review and comments please!
- Clarifying the Concepts of Intent and Policy [draft-clemm-nmrg-dist-intent-01](#)
 - Comments received from Juergen S., Brian C. – more are welcome.
 - new version soon
- Levels of abstraction for network service specification, Walter Cerroni
 - Short presentation and discussion
- Towards a reference architecture for intent based networks, Marinos Charalambides
 - Short presentation and discussion

- ANIMA Intent Policy and Format [draft-du-anima-an-intent-05](#) (expired)
- Intent Distribution for Autonomic Networking [draft-liu-anima-intent-distribution-00](#) (expired)
- Concepts of Network Intent [draft-moulchan-nmrg-network-intent-concepts-00](#) (expired)

Research agenda



More details in

<https://ieeexplore.ieee.org/stamp/stamp.jsp?arnumber=8334913> (page 15)