



**RIPE NCC**  
RIPE NETWORK COORDINATION CENTRE

# New IP

## What Is It Really About?

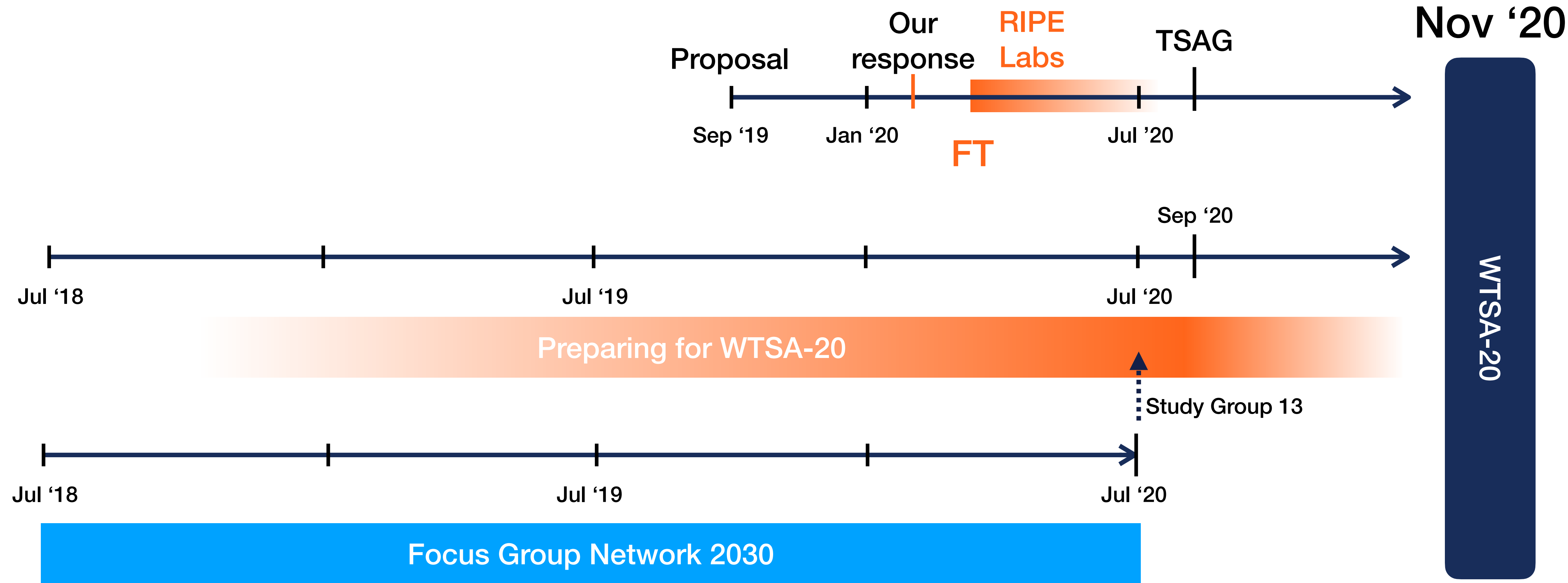
# The Proposal at TSAG



- Contribution 83, 23 September 2020 (Huawei, et al.)
  - “... As the WTSA-20 is approaching, it is the right time for ITU-T to consider designing a **new information and communications network with new protocol system** that satisfies and serves for the future. There are **great opportunities for ITU-T to play a leading role** in a strategic transformation and pay more attention to the new future network research with New IP protocol system. As the international technology and standard organization, ITU-T is suggested to take a long-term view and **shoulder the responsibility of a top-down design for the future network...**”

(Emphasis RIPE NCC.)

# Timelines



# What Is New IP?



- Everybody is still a bit confused
  - We have more questions than answers
- It appears more a philosophy than a concrete idea
- From presentations by Huawei staff:
  - Moving from centralised to decentralised
  - Top-down design and control
  - More flexible addressing space
  - Geographically-based addressing; "diverse IDs to indicate destination"
  - "Provide universal, equal and wider connectivity"

# It Is Not a New Technology



- It is presented as an architectural framework
  - Based on the idea that the current Internet is somehow failing to deliver
- Whatever the technology, it is not very new
  - We have seen locator/identifier separation before
  - We have explored variable length addressing
  - We filter and block traffic all the time
  - If you can think of some middleware, it probably already exists
  - Open Systems Interconnection Model, X.25, ATM

# Is It a New Internet?



- What defines the Internet:
  - Is it a matter of technology, like the use of TCP/IP?
  - Is it a matter of values and behaviour?
- New IP documents refer to “Manynets”
  - Claiming TCP/IP has only limited use
  - Proposes a heterogeneous network of networks
  - Include non-IP based networks or replace IP networks

# A New Package



- We know that many technologies and capabilities exist
  - Many are already in use, the “Great Firewall” is not a secret
- Many governments and politicians are asking for similar tools
  - Even close to home: think elections, trolling and fake news
- New IP promises to solve the many problems
  - It proposes a new much tighter top-down control structure
  - It could monetise on existing security, tracking and filtering features
- Having an international standard makes it easier to sell
  - It is often a prerequisite for public tenders

# Watch Out For Components



- New IP as a package might not make it
- Work has already started on some components
  - We expect more to come
- The high-level is important, but don't let it distract you
  - The real work is hiding deep down in the Study Groups
  - Very labour intensive to track every little bit
- Need to share the load and intelligence we all have
  - Making sure our government representatives engage at the right points



# Encore

ETSI and Non-IP

# Probably not a Duck!



- ETSI recently started a group on non-IP networking
  - It looks and sounds a lot like New IP and if it walks like a duck...
- RIPE NCC is not an ETSI member
  - What we know is in public sources and some chatter in the hallways
- Appears to be driven by telcos looking for profit
  - Many still feel the Internet killed their goose laying golden eggs
  - Seeking to create walled gardens that limit the use of OTTs
- Could create a perfect storm
  - 5G slicing is also still in development



# Questions



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