



RIPE NCC

RIPE NETWORK COORDINATION CENTRE

New IP

What Is It Really About?

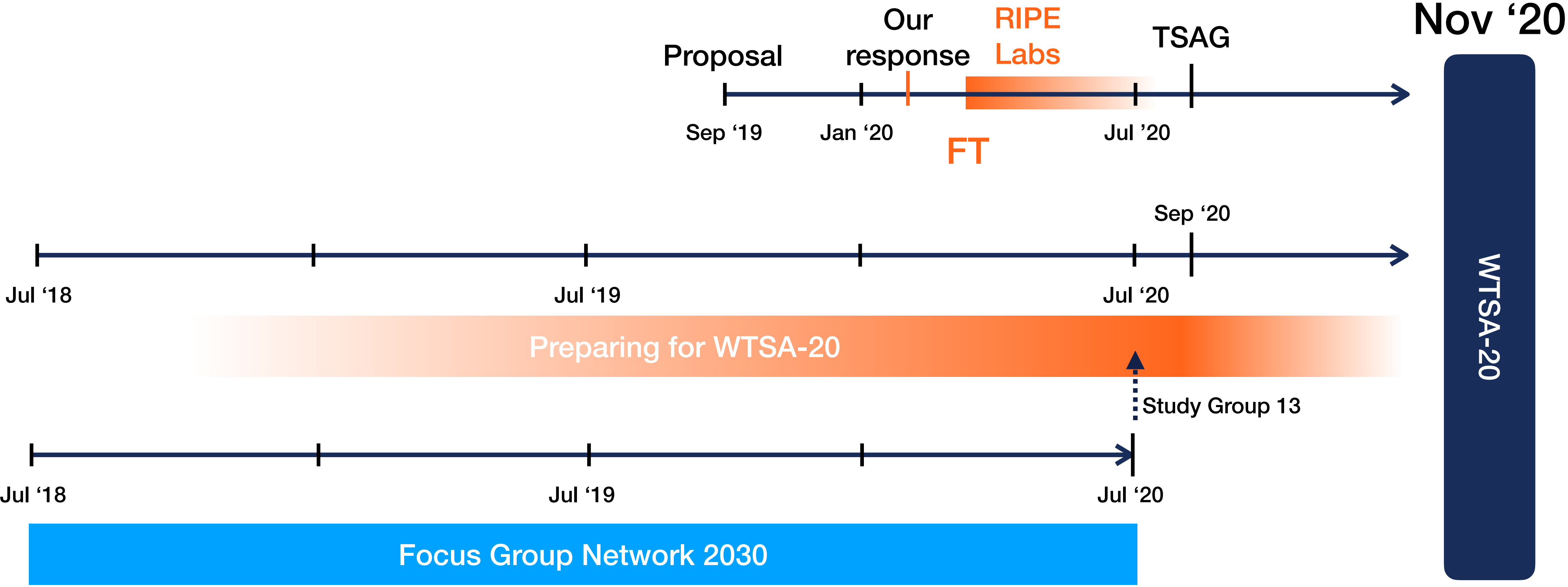
The Proposal at TSAG



- 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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