

Meeting minutes, ns-3 maintainers meeting, January 6, 2021

Attendees: Tom Henderson, Federico Guerra, Jared Ivey, Rediet, Mohit Tahiliani, Stefano Avallone, Tommaso Zugno, Tommaso Pecorella

Minutes taken by Tom Henderson.

1) Each attendee summarized their 2021 ns-3 plans:

- Tom: Funded work is on 5G public safety, scalable wireless, and cable modems; other maintenance work is on making releases, repair and refresh bake and DCE, animation, general usability.
- Sebastien (not present) relayed that beyond items already in the tracker, he is interested in 802.11be and PHY refactoring to support WiGig
- Federico would like to make WOSS available through the app store and continue maintaining uan module
- Jared plans to contribute on scalable wireless and 5G mmWave
- Mohit shared slides on TCP plans (BBRv1, v2, RACK, FACK, DSACK, AccECN) and traffic control (finish CAKE ACK filtering, FQ refactoring, other qdiscs pending such as PI)
- Rediet interested in PHY layer rework, 11be, and NR-U
- Stefano wants to focus first on the Frame Exchange Manager (wifi), and then move to publish merge requests on the OFDMA MAC, as well as traffic control maintenance
- Tommaso Pecorella plans to work on GSoC NetDeviceState, 6LoWPAN, RPL, and TCP path MTU detection
- Tommaso Zugno is working on antenna array models

2) Administrative updates

- ns-3 now has a PayPal button on its SPI page
- Tom sees SPI's role as providing general funding account (donations and GSoC payments), help with license, copyright, and trademark issues, and general open source governance. The ns-3 Consortium will continue to organize WNS3, maintain funding for hardware and small development projects, and coordinate research, education, validation, and training.
- Other industry consortia are forming around ns-3, and we need to look after potential trademark issues and communications about the relation of these to the open source project

3) 2021 events

- GSoC2021 (19 February application): Tommaso and Mohit will be org admins
- March 1-4: IETF virtual hackathon. Mohit and Tom plan to participate; possibly Tommaso
- ACMSE tutorial (April 15-17): Tom and Lorenza will provide a 5G tutorial; looking for other training opportunities later in the year
- WNS3 (June 21-25) looking for ideas on how to improve for this year
- What other events could potentially bring new contributors? Tom asked maintainers to consider for the future.

4) ns-3.34

- Current ns-3.33 was planned for November but is being published in January. Next scheduled release would be May, if we follow a 4-month cycle. Would like it no later than May but possibly earlier.
- Discussed going on a two-week code review cycle to work through the backlog (announce that we want reviews on a MR or set of MR for one week, then allow one week to resolve comments, and then merge).
- Each maintainer identified some priorities; these will be listed on the ns-3.34 wiki page: <https://www.nsnam.org/wiki/Ns-3.34>

5) Issues with larger scope

Tom brought up again the need for a champion or two to handle issues with larger scope, such as whitespace fix. Several such issues arise in discussions on the list but we need a champion to bring them to closure; e.g.:

- local node clocks
- whitespace or other code cleanup
- performance profiling fixes
- core changes to support more parallelization
- build system (CMake support, Windows and IDE support)
- Coding style/C++ language support

Rediet suggested that we try to do whitespace cleanup just before release. Tom replied that we also need some way to ensure that our tools are consistent across maintainers, and ways to flag these issues in advance (such as a builds slave job).

Tommaso Pecorella had an idea about trying to pair new contributors with a mentor (such as a maintainer in their area of interest) and volunteered to give this idea a try.

Tom suggested for a future meeting that people think of new topics that ns-3 needs to cover to continue to stay relevant. Better AI framework integration is one example. Tommaso Pecorella suggested SDN. Perhaps we can schedule a discussion at WNS3.