

Minutes from April 1 2022 meeting of the ns-3 Consortium Advisory Board

Minutes taken by Tom Henderson

Attending: Tom Henderson, Manuel Ricardo, Sandra Lagen, Mohit Tahliliani, Walid Dabbous, Damien Saucez

Agenda:

- 1) Approve meeting minutes for February 8 meeting (Tom Henderson)
- 2) Budget update and 802.11ad development status (Tom Henderson)
- 3) WNS3 status and planning (Tom Henderson)
- 4) omnest vs ns3 for simulating industrial networks (Damien Saucez)
- 5) activities in the context of disaggregated radio access networks platforms vs simulation (Walid Dabbous and Damien Saucez)

The minutes for the February 8 meeting were approved and will be posted. Tom shared that the updated funding status was \$11,600 available, with pending expenses (software development and ACM conference fees) expected to draw the balance down to roughly \$9,000 by the end of the fiscal year (end of June). Tom discussed with Sebastien Deronne about the wrapup of the WiGig integration work and a plan for handing the code over to Georgia Tech and IMDEA for further work. To fund further software work and to position the consortium to support travel grants for future meetings, the consortium will need to attract additional industrial funding; sponsorship of WNS3 may be an option to try.

WNS3 is in the review process; 26 submissions (nearly an all-time high) were received. Tom polled the maintainers about tutorials and about providing a hackathon, and there was some interest expressed for both. CTTC plans to organize a tutorial around NR, NR-U, and/or V2X. WNS3 will be the week of June 21.

Damien shared his experience in supporting network simulation work for a company in the aviation industry. Although the original plans for the project were to use ns-3, the company decided to switch to Omnest (the commercial version of OmNET++) for the following reasons: Windows operating system support, licensing (ns-3's GPLv2 was a concern), easier abstractions available via the NED language that OmNET++ uses (especially to glue components together and to model interactions that match how IEEE standards are described), and a GUI that makes simulation and model composition easier than writing C++ code. The purpose of the talk was to share some practical experience of the tradeoffs between the two tools for this type of industrial user.

Walid and Damien also described Inria's effort in the European SLICES research infrastructure project, in which they are partnering with EURECOM. This activity will be a major effort of Walid's group for the near future, and has an emphasis on how to deploy infrastructure for emerging cellular networks. There is a lot of software and hardware integration involved, including components for ONF's SD-RAN architecture. Walid remarked that they are still investigating whether and how simulation might play a role in this effort. Sandra commented

that they had studied how to split the ns-3 LENA model along the RU/DU split at the physical layer, so that front-haul delays could be modeled, but this type of split is difficult in ns-3 because the ns-3 Phy is very abstracted.