

## Meeting minutes for the ns-3 Consortium Annual Meeting, June 16, 2016

On June 16 at the University of Washington, Tom Henderson convened the annual meeting of the ns-3 Consortium. This was an open meeting attended by roughly 30 people, including steering committee members Tom Henderson (UW), George Riley (Ga. Tech), Manuel Ricardo (INESC Porto), Sumit Roy (UW), and Lorenza Giupponi (CTTC), and regular members Peter Barnes (LLNL) and Mohit Tahiliani (NITK Surathkal).

Tom presented an overview of the consortium structure, budget status, and 2015-16 activities. He announced that the 2017 annual meeting is scheduled for 12-16 June 2017 hosted by INESC Porto. Tom also mentioned two current and pending activities agreed by the Steering Committee at a previous telecon: 1) update the main web site to be more mobile-friendly and expose more demos of ns-3 usage, and 2) explore use of Amazon Web Services (AWS) to access HPC infrastructure, and document the findings. On the latter point, George Riley and Peter Barnes both expressed feedback that such access is expensive, and agreed to provide more details at a later date.

Tom next introduced a series of topics for further discussion, with results summarized below.

### 1) WNS3 remote participation and video archiving?

The consortium considered and ultimately decided against live streaming of the workshop and training sessions, mainly due to cost reasons. He also noted that there were some connection and audio quality issues around the remote presentation of one talk presented via video recording in the morning. Tom asked i) whether remote participation should be modified, and ii) whether live streaming (possibly for a registration fee) could be enabled for future meetings. There was strong consensus expressed that there is a benefit of having the paper presenters physically attend the meeting, so there was not any interest in promoting remote talk presentation unless exceptional (travel, medical) reasons necessitated it. For such cases, it was proposed that the presenter submit his or her pre-recorded talk to the TPC chairs, in advance of the workshop, to work out any quality issues in advance. However, the meeting agreed that there would be benefit to making remote attendance (from non-presenters) possible for future workshops, and discussed the logistics of facilitating that (such as having a person devoted to transcribing questions from an online chat session to ask the speaker questions). Tom agreed to investigate enabling remote streaming for the Porto meeting next year.

### 2) More industrial involvement, both code and funding contributions, and opportunities for research/government funding?

Tom noted that we are still looking for more funding or mechanisms to solicit more involvement from industrial users, and asked the audience whether there were any new ideas in this regard. One participant suggested that online training opportunities may be well received by industry. In general, however, there was not much discussion on this topic.

### 3) Windows Visual Studio priority/status?

Tom noted that one possible project for which we might explicitly ask for sponsorship through the consortium is to update and maintain the native Windows Visual Studio port originally created a few years ago. Brian Swenson observed that past efforts were focused on the avoidance of having any Python dependence, and if that were relaxed, the port would possibly be easier. Also, it was noted that Microsoft compiler alignment with C++ standards has gotten much better, so the size of the patch due to compiler differences should be much smaller today. Someone also remarked that the emerging

support of bash and other Linux utilities in Windows 10 might potentially ease the path also for use within Windows.

There were no actions generated; this activity still needs sponsorship or a volunteer maintainer to move forward.

#### 4) WNS3 and/or training-- how to improve?

There were no specific items discussed for this point.

#### 5) Continuing need for more maintainers

Tom showed a graphic depicting the number of very active maintainers (presently a low number). Peter suggested further annotating it with statistics on a per-module basis describing # of open bugs and # of bugs closed (or lines of code changed) for each release.

There were no new suggestions for possible maintainers or how to increase the number of active maintainers.

#### 6) Plans for dealing with contributed code

Tom described his ongoing plans to enable a more modular ns-3 build and invited comments on the proposal for ns-3.26 listed on the wiki. In general, he advocated making the project core smaller and having a more federated system for contributed models, with the tools to bring the models together coherently for ns-3 releases.

#### 7) Plan to start making binary packages

Tom recounted the recent discussions on providing binary packages through normal package distribution channels, noting that someone recently created Debian packages. Tom suggested that the open source project should coordinate how the downstream packaging works across different platforms; again, this is a topic for which a maintainer is sought.

#### 8) Git and git workflow

Finally, Tom noted that some maintainers have advocated a switch to git and related tools complaining that the current mix of Mercurial, bugzilla, Rietveld, and Jenkins is too disjoint to keep track of patch status. A possible move to git might be related to steps taken for 6) above to shrink the ns-3 core. No action items were taken; the issue was just noted as a possible change under discussion with the maintainers.