An Update on INET Development

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Areas of Work

We are working on:

- Framework Infrastructure
- New protocols
- Documentation
Framework Infrastructure Development

- Wireless infrastructure ✔ (in INET 3.2)
- Visualization (2D/3D) ✔ (in INET 3.4)
- StandardHost restructuring ✔ (unreleased - to appear in INET 4.0)
- Cross-layer communication (packet tags) (in progress)
- Flat packets (planned)
- Mobility refactoring (planned)
New Protocols

- IEEE 802.11 MAC
  - Full-blown, modular and extensible MAC, supporting experimentation
  - Status: in progress, see separate presentation: *An outline of the new IEEE 802.11 model in the INET framework*
Documentation

We are working on two kind of documents:

- Tutorials
- Showcase simulation examples

The INET Manual is put on hold. Why?

- A comprehensive manual would take too much effort
- Tutorials are a more effective way to convey knowledge in specific areas
Tutorials

- Wireless Tutorial ✔ (released in INET 3.4 and online)
- IoT Tutorial ⏰ (planned) ⌨️ (help needed!)
- Sensor Networks Tutorial ⏰ (planned) ⌨️ (help needed!)
- Advanced Wireless Tutorial ⏰ (planned)
- Visualization Tutorial ⏰ (planned)
- WiFi Tutorial ⏰ (planned)
- Routing Tutorial ⏰ (planned) ⌨️ (help needed!)
- IPv4Configurator Tutorial ⏰ (planned)
- Energy Management Tutorial ⏰ (planned) ⌨️ (help needed!)
- Ideas?
Showcase Examples: What Are They?

Current example simulations were mostly born as tests for some model or feature, and not designed for educational value…

Showcase examples:

- Contain a clear problem statement
- Simulation model has clear focus, and strives for simplicity
- Documentation complete with:
  - model description
  - expected results
  - explanation of what happened
  - result analysis
- Reasonably self-contained, ready for publishing online
Currently Implemented Showcase Examples

- Wifi Throughput ✔
- Wifi Handover ✔
- Wifi Hidden Node ✔
- Wifi Rate Control ✔
- Wifi Power Consumption ✔
- Wifi Error Rate ✔
- Wireless Radio Level of Detail ✔
- Ideas?
Demo

Showing:

- some Showcases
Thank you