Bringing ECOFEN to OMNeT++

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ECOFEN

Module for the NS-3 network simulator

- Energy Model: measure the energy consumption
  - Nodes
  - Interfaces

- Green functions: reduce the energy consumption
  - Node
    ON/OFF
  - Interfaces
    ON/OFF
    Adaptive Link Rate (ALR)
    Energy Efficient Ethernet (802.3az)

*http://people.irisa.fr/Anne-Cecile.Orgerie/ECOFEN/index.html
Power Saving in Wired Networks

Actual work:
→ Sleep modes and Power Aware Routing
  → Reroute and turn off/on

To be done:
→ Adaptive Link Rate
→ Energy Efficient Ethernet
ECOFEN in OMNeT++/INET?

Model the power consumption

😊 new power model in INET 3.0

Switch OFF/ON

😊 Lifecycle controller
Model the power consumption
Switch OFF/ON

```cpp
bool BGPRouting::handleOperationStage(LifecycleOperation *operation, int stage) {
    throw cRuntimeError("Lifecycle operation support not implemented");
}

bool IPv6::handleOperationStage(LifecycleOperation *operation, int stage) {
    throw cRuntimeError(
```
ECOFEN in OMNeT++?

Is the community interested?

Changes must be applied all over INET

Lots of unimplemented features (lifecycle controller)

Can be confusing for a new user
Thank you

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