Artificial Intelligence
In Networking

Laurent Ciavaglia, laurent.ciavaglia@nokia.com
Marie-José Montpetit, marie@mjmontpetit.com

Special IRTF Session
7/19/2008
IETF 102
Agenda

• Why are we here?
• Presentations
  – Network for AI (Lijuan Chen)
  – Artifacts for Intelligence Driven Networks (Pedro Martinez-Julia)
• Summary of the options
• Future steps
Why are we here?

- IETF 101 HotRFC
- More and more discussions around AI and networking
- Should our IRTF/IETF community take notice?
Summary of the options

• Current low hanging fruit
  – Take AI algorithms
  – Apply them to a networking problem
  – See what happens

• More interesting
  – Develop network-specific AI-ML with topic expertise to solve a problem
  – In turn then let these algorithms learn from the network and produce new network paradigms (get rid of the IETF)

• Another interesting approach:
  – Add computing to the network
  – See how that functionality can support and help AI algorithm to perform network tasks
  – In turn see how the AI algorithms can in turn influence the behavior of the computing element

• Common issue centralized vs. decentralized approaches in terms of:
  – CPU, energy, sustainability etc.
  – Federation/synchronization
  – Performance
Next steps

How do we move forward?