Performance Evaluation in Wireless Networks and Technologies from 2.5G, 3G, LTE to 4G and Beyond

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FI vs. IP
Current OSI Model

OSI Model

Data Unit

Layers

Host Layers

application
Network Process to Application

presentation
Data Representation & Encryption

data

session
interhost Communication

segments

transport
End-to-End Connections and Reliability

Media Layers

packets

network
Path Determination & Logical Addressing (IP)

frames

data link
Physical Addressing (MAC & LLC)

bits

physical
Media Signal and Binary Transmission

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OSI Model vs. FI Model

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**OSI Model layers**
- application: Network Process to Application
- presentation: Data Representation & Encryption
- session: Interhost Communication
- transport: End-to-End Connections and Reliability
- network: Path Determination & Logical Addressing (IP)
- data link: Physical Addressing (MAC & LLC)
- physical: Media Signal and Binary Transmission

**FI Model layers**
- application
- mediation
- connection
FI 3-Layers Model

- Overlay adapted to underlying layers
- Increase efficiency and robustness
- Supporting transport over any kind of networks
- Heterogeneity of network technologies
- Interoperability between technologies
FI: The New Architecture

Global Infrastructure

Networking Operation Infrastructure

Wireless Access Sensors

VS Backbone Network

Wireless Access Actuators