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A Telecom View on "Ethernet in the Back-plane"

- The telecom industry will adopt the blade concept.
  - FE/GE and 10GE will be one of the most cost-efficient system inter-connect technology.
- The back-plane will be part of the connectivity network.
  - "The network is the switch" paradigm will be widely adopted.
  - Open networking standards must be used to interconnect systems.
  - Rack and sub-rack interconnect standards must be considered.
- Telecom grade will be required!
  - Resiliency of networks and high availability of services are expected.
    - Support of fault detection/localization/isolation is required.
  - Quality of service support is required.
  - Equipment practices should be "carrier grade".

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Why Will Telecom Adopt the Blade Concept

- A trend in the server industry.
  - "Cost-efficient, extremely manageable high-density rack servers"***.
- Cost-efficient:
  - Shared infrastructure components (power, Ethernet, mechanics).
  - Savings in physical deployment costs.
  - Savings due to reduced floor/rack space.
- Manageable:
  - Common management of infrastructure components.
  - Common management of infrastructure related blade functions.
- Fewer parts – fewer faults – higher availability.
  - Connectors, cables,,.

*** Quote from an IBM white paper titled "Why Blade Severs?" .

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The IEEE 802.3 Criteria for a New Project (PAR) - Ethernet in the Back-plane

- **Broad market potential.**
  - Applicable to server industry, telecom industry,,,
- **Compatibility.**
  - Same MAC, GE PHY and 10GE PHY based on existing and emerging standards.
- **Distinct identity.**
  - Targets the blade concept scenario focusing on system interconnect using IEEE 802 standards.
- **Technical feasibility.**
  - Builds on existing technology (e.G. PHY and SerDes).
- **Economic feasibility.**
  - Large cost savings in system and platform solutions.