Blade Servers & the Relative Cost Impact of Materials

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Introduction

• The IEEE P802.3bj project was partially justified by providing an upgrade path for the next deployment of backplanes to be able to support 100G blade servers in 2017.

• What is the relative cost impact of the upgrade path?
  – i.e. the backplane

• What is the relative cost impact to blades?

• Note - Costing analysis with major supplier done in 2010 and reviewed in 2011 (minimal change).
Relative Cost Impact of Materials on Midplane

[Bar chart showing relative cost impact of materials on midplane, comparing different models.]
Relative Percentage of Bare PWB to Total Cost

Note: Total Cost = Cost of fully assembled midplane
Relative Cost Impact of Materials on Different Line Cards

![Bar chart showing relative cost impact on different line cards. The chart compares four designs labeled as Design #1, Design #2, Design #3, and Design #4. The cost impact is shown as a percentage increase over the current cost. The percentages range from 0% to 350%. The colors used are Current Cost (red), IT150DA (yellow), and Megtron 6 (green).]
Summary

- Significant cost impact of materials
  - Reducing loss budget shifts designs up the cost curve
  - The true cost impact is design dependent
  - Bare PWB can become a significant portion of total cost