

Enhancing Product Reliability

In the Internet Networking Equipment Industry

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Multiven

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Agenda

- Introduction — Multiven
- Challenges — Network Equipment Failures
- Consequences — Impact to Manufacturer
- Solutions — Enhancing Product Reliability
- Q&A

Introduction – Multiven

- **Company** – the leader in premium multivendor IP network services.
- **Headquarters** – Redwood City, California
- **Customers** – ISPs, MSPs, Fortune 500 Enterprises, Government
- **Solutions** – Multivendor Network Maintenance Services, Network Consulting, Executive Advisory Services.
- **Coverage** – 130 countries worldwide
- **Service Availability** – 24x7x365

Facts

In 2008....

- Over 200 million network break-fix issues reported worldwide
- Over \$100 Billion was spent fixing those issues. This excludes the costs of end-customer lost revenue, productivity and dissatisfaction as a direct result of these outages.
- Over 50% of all network problems are repeat occurrences of issues that was previously 'known' to another customer or someone within the manufacturer's organization – *We could have saved \$50 Billion by communicating better!*

Common Recurring Break-fix Issues

- Personnel Induced Failures (PIFs) e.g. ESD, Misconfigurations, etc.
- Software Bugs
- Parity Errors

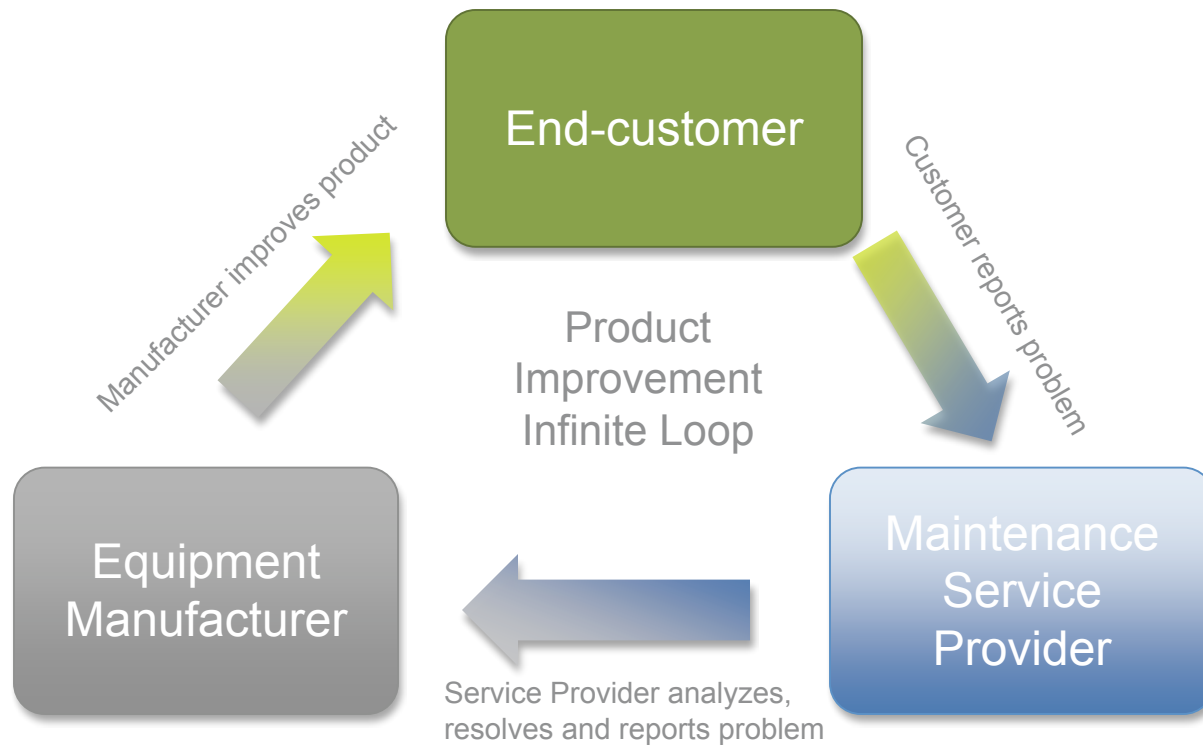
Key Challenges facing Manufacturers

- Lack of TAC expertise resulting in misdiagnosis of issues.
- Limited collaboration between internal TAC-SDE-BU teams.
- Failure of TAC and SDE to proactively glean flaws from the feedback of customers and their support and maintenance service providers.
- Insufficient root-cause-analysis, engineering failure analysis (EFA) and critical thinking-beyond-the-fix.

Consequences

- Protracted Network Outages
- End-Customer Dissatisfaction
- Lost Revenue
- Loss of Competitive Edge
- Brand Erosion

Proposed Solutions



Proposed Solutions – Technology

- Use CPUs with ECC
- Implement CERF in Software
- Improve Pre-FCS QA Testing
- Make Software Log Errors & Intuitive Suggested Solutions
- Introduce Multi-Lingual Operating System
- Introduce Intelligent User Configuration Logic Checker

Proposed Solutions – People, Processes & Tools

- Encourage global collaboration internally between TAC, SDE & Product Development Business Units – Suggested tool – *Pingsta-ICE™
www.pingsta.com
- Encourage and reward real-time product usability feedback from customers and independent maintenance service providers
- Document & make openly available product support best practices & caveats database for customer self-help - Suggested tool -. *mySolvr –
www.mysolvr.com
- **Open is the new closed** – Openly communicate product defects & solutions to customers in real-time - Possible solution - Blog Posts, RSS Feeds, Podcasts, Email Notifications.
- *Disclosure - author founded company

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