The Role of Support in the Development Process
Background
The Problem

• Lack of Documentation
• Lack of Information
• Lack of Involvement
The Research Question

- What Role SHOULD Support Engineers play in the Development Process?
- What Role DO Support Engineers play in the development process?
Different Types of “Support”

• **The Customer Service Rep**
  Handles routine, repeated and predictable issues for individual customers using clearly defined processes. Minimal technical expertise required.

• **The Support Technician**
  Does basic technical troubleshooting for customers, resolves the majority of issues but may refer more difficult issues to a higher tier. Some technical expertise required.
Different Types of “Support”

- **Second Tier**
  “Advanced” support, may act as a resource for lower tier, as a gatekeeper between lower tier and developers, or as a first-line support engineer for important clients or challenging cases. Higher degree of expertise needed.

- **The Solutions Engineer**
  Essentially a developer / product owner who develops / maintains solutions for individual customers.
Non-Support “support engineers”

• **Maintenance Engineer**
  Responsible for maintaining or monitoring a system.

• **The Junior Developer**
  Performs repetitive or mundane tasks for developers.
Case Studies
Case Study #1: Alpha Company

- Company in the who creates and maintains custom database applications for a small pool of business clients
- Four developers – all generically titled “programmer.”
- Basic user documentation only
- No distinction between a Support Engineer and a Developer.
Case Study #2: Bravo Company

- Company who creates and maintains a web widget with a data back-end to monitor and display positive customer reviews.
- A CTO and fourteen nominally undistinguished developers
- Hundreds of business clients
- One developer has, de facto, taken on the support role.
Case Study #3: Charlie Company

- Company who develops and maintains an online gaming platform for end-users.
- Engineering department with 23 workers, 8 of whom are designated as support engineers.
- Little documentation, but high contact between developers and support engineers
- High mobility between Development and Support.
Case Study #4: Delta Company

- Company whose primary business is to maintain cell towers and other radio equipment, but who, as a side venture, sell monitoring software.
- Engineering department with 20 workers, 13 of whom are designated as “support.”
- “Support” consists of “Tier 1,” “Tier 2,” and a development team tasked with responding to customer issues.
- High interaction
Case Study #5: Echo Company

• Large company with many distant locations that maintains a web-based applications for numerous business customers.
• Engineering division for 600 employees, 48 of whom are designated “support,” but first tier support provided by “sales.”
• Formalized escalation process with two tiers within “support,” and designated liaisons with product owners.
• Support co-located with development, so some informal interaction.
Case Study #6: Foxtrot Company

• Large company with many locations that provides technical support to end-users on behalf of companies who choose to outsource their support work.
• Several hundred front-line support engineers and ancillary personnel who provide tooling and limited research and documentation.
• Interaction with development is minimal, and takes place through liaisons at a high level within the company.
Observations and Further Questions

- Size matters.
- Evolution matters.
- Channels, and substance, of communication matter.
- Attitudes matter.
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