Software Engineering in Puerto Rico

Rock Solid Technologies, Inc.
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Rock Solid Technologies
www.rocksolid.com

- Software development and implementation firm
- About 30 Colegiales
- Offices
  - San Juan
  - Austin, TX
  - St. Michael, Barbados
What is software?

- Programs
- Documentation
- Manuals
- Help files
- Licenses
Software engineering definition

- ... is concerned with software systems which are built by teams rather than individual programmers, uses engineering principles in the development of these systems, and is made up of both technical and non-technical aspects...
Trade-offs Triangle
Tradeoff Matrix

The diagram illustrates a tradeoff matrix with columns for Fixed, Chosen, and Adjustable. The rows correspond to Resources, Schedule, and Features. The matrix shows that Resources and Features are fixed, while Schedule is chosen and adjustable.
What is software engineering – my version?

- Marketing
- Proposals
- Economic Analysis
  - ROI
  - TCO
- Sales
- Legal – Contracts
- Licensing
- Requirement Definition
- Prototype
- Risk Management
- Design
- Coding
- Testing
- More testing
- Training
- Implement
- On-site Support
- Help Desk
- Maintenance
- Enhancements
- Re-negotiate
Well engineered software

- Functional
- Maintainable
- Reliable
- Efficient
- Appropriate user interface
  - User-friendly
  - Expert-friendly
Software Models

- Waterfall model
- Iterative waterfall model
- Prototyping
  - Works well for us in government
- Others
MSF Process Model

- Deployment complete
- Envisioning phase
- Developing phase
- Stabilizing phase
- Planning phase
- Vision/Scope Approved
- Project Plans Approved
- Scope Complete
- Release Readiness Approved
The key to good Software Engineering – Knowing what the customer wants!

<table>
<thead>
<tr>
<th>What the user asked for</th>
<th>How the analyst saw it</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Diagram" /></td>
<td><img src="image2" alt="Diagram" /></td>
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</table>

<table>
<thead>
<tr>
<th>How the system was designed</th>
<th>As the programmer wrote it</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image3" alt="Diagram" /></td>
<td><img src="image4" alt="Diagram" /></td>
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</table>

<table>
<thead>
<tr>
<th>What the user really wanted</th>
<th>How it actually works</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image5" alt="Diagram" /></td>
<td><img src="image6" alt="Diagram" /></td>
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</tbody>
</table>
How to improve your chances?

- Learn to write
  - Not just software code
  - Spanish and English
- Learn to listen
- Learn to speak
- Networking: Student and Business Orgs
- Focus on learning the business
- Become a well rounded professional
- Give back to your community, school, etc.
Q&A

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