Open Source Community Organization

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Motivation and Problem Area

- **Motivation**
  - Scubuntu project <URL: www.meraka.org.za/scubuntu.htm>
  - Simpler ways of establishing and maintaining an OSC

- **Problem**
  - Scattered literature (published articles) on OSC
Research Objectives

• Provide insight into establishing and maintaining an OSC
• Propose a framework for OSC models
• Compare and analyse already successful OSCs
  - 4 case studies (Scilab, Debian, Apache, Ubuntu)
Research Methodology and Approach

- Methodology
  - qualitative study

- Approach
  - Framework
  - Comparative case study analysis
Major Outcomes/Results

- Framework developed for discussing OSCs
- Identification of key aspects influencing the OSC success
  - Attractiveness for new contributors and users
  - Governance and coordination strategy, leadership styles, community constitution
  - Growth and maintenance
Proposed Framework for OSC Models

Establishing an OSC

Maintaining an OSC

Growing an OSC

Governing an OSC
Comparative Analysis

- OSC Initiation

<table>
<thead>
<tr>
<th>Started by</th>
<th>Goal</th>
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<tbody>
<tr>
<td>Scilab</td>
<td>Address gap in OSS</td>
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<tr>
<td>Debian</td>
<td>Accelerate Linux adoption</td>
</tr>
<tr>
<td>Ubuntu</td>
<td>Give back to OSS community</td>
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<tr>
<td>Apache</td>
<td>Ensure survival of project</td>
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Comparative Analysis (cont...)

• OSC governance

<table>
<thead>
<tr>
<th>Governance mechanism</th>
<th>Style</th>
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<tbody>
<tr>
<td>Scilab</td>
<td>Governed by committee, community manager</td>
</tr>
<tr>
<td>Consortium of stakeholders and partners</td>
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Debian
- Elected leadership
- Strong constitution

Democracy (each contributor has equal an vote)

Ubuntu
- Self appointed leader
- Councils and boards (some elected)

Combination of autocratic with democratic styles – key driver is pragmatism

Apache
- Leadership, based on track record of contribution

Meritocracy – led by top contributors
Comparative Analysis (cont...)

- OSC growth

<table>
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<th>Success factors</th>
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<tbody>
<tr>
<td>Scilab, Debian, Ubuntu, Apache</td>
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<tr>
<td>Projects rely on referrals, members participation, donations and reputation</td>
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<tr>
<td>for growth</td>
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- OSC maintenance

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<td>Resolution of common issues</td>
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</table>
• Scilab
  – OSS consisting of numerical scientific software packages
  – Intended for engineering and scientific applications

• Debian
  – OS Linux distribution
  – Community owned and driven

• Ubuntu
  – Popular Linux distribution
  – Based on Debian

• Apache
  – Continuation of HTTPD web server from NCSA
  – Moved away from NCSA version, received lot of contributions
Rules Required for OSCs

- When organizing an OSC
  - communication, planning, infrastructure
- Governing an OSC
  - governance, leadership styles
- Growing an OSC
  - motivate people, involvement, recognise contribution
- Maintaining an OSC
  - common issues
Conclusion and Outlook

• Framework
• Comparison of existing OSCs
• Success requires
  – the community be accessible for new contributors and users
  – good governance structures
  – open communication
  – strong leadership
• Future work:
  – need for transparency and openness vs the need for strong governance
  – how governance style impacts community size and composition