Motivations and Scenarios
for Using Multiple Interfaces and Global Addresses

draft-ietf-monami6-multihoming-motivation-scenario-02.txt

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Introduction

• Document to be taken in a broader sense
  – not bound to mobility usages; nomadic and fixed usages have the same needs
  – we barely mention addresses

• Structure
  – Scenarios
  – Goals and benefits of multihoming
  – Analysis (1 vs n interfaces)
  – Generic Issues
Section 3: Scenarios (1/2)

- **Mona**: Need for Ubiquitous Access to the Internet
- **Oliver**: Need to Redirect Established Sessions
- **Nami**: Need to Set Up Preferences
- **Alice**: Need to Select the Best Access Technology
- **Max**: Need to Dispatch Traffic over Distinct Paths
- **Ingrid**: Need for Reliability
- **Roku (6)**: Need to Accelerate Transmission
Section 3: Scenarios (2/2)

• Have realistic scenarios matching the NEMO WG RO use cases:
  – for automotive (scenario 3.5):
    • new text, now focus on ITS
    • refer to CALM (ISO TC204 WG16) and Car-2-Car Communication Consortium (cf NEMO WG)
  – for aeronautics: Got text from Frank Schreckenbach (DLR - German Aerospace Center)
  – for personal mobile router (consumer electronics): Text welcome
Section 4: Goals & Benefits

• 4.1. Permanent and Ubiquitous Access
• 4.2. Reliability
• 4.3. Flow Redirection
• 4.4. Load Sharing
• 4.5. Load Balancing/Flow Distribution
• 4.6. Preference Settings
• 4.7. Aggregate Bandwidth
## Section 5: Analysis

<table>
<thead>
<tr>
<th>Feature</th>
<th>Single Interface</th>
<th>Multiple Interfaces</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ubiquitous Access</td>
<td>No</td>
<td>Maybe</td>
</tr>
<tr>
<td>Flow Redirection</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Reliability</td>
<td>Maybe</td>
<td>Yes</td>
</tr>
<tr>
<td>Load Sharing</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Load Balancing/Flow Distribution</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Preferences</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Aggregated Bandwidth</td>
<td>Maybe</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Section 6: Generic Issues

• Is the current list complete?
  – source address selection
  – recovery delay
  – change of e2e path characteristics
  – transparency

• Since we barely mention about addresses, "address selection" should be "path selection". OK?
Next Steps

• Need to list requirements for achieving the multihoming goals? e.g.:
  – ability to keep sessions continuously opened (this implies mobility support and transparency)
  – ability to divert flows,
  – ability to monitor link status,
  – ability to use multiple paths simultaneously
  – ability for the user/application to make choices

• Shall we deal with QoS / Fast handover aspects?
Next Steps Right After Chicago

- July 07: Complete the document with text around aeronautics and personal mobile router scenarios and issue a new version
- August 07: Issue a WGLC
  - is everyone happy with the draft?
  - is August appropriate time for WGLC?