Defense Research and Engineering Network Implementation Details
— 2003 to 2008 —

IPv6-team
@hpcmo.hpc.mil
Preparation for IPv6 deployment
(Success factors for any change)

Effects of missing factors:

Vision  |  Incentives  |  Resources  |  Skills  |  Action Plan  |  Change

Vision  |  Incentives  |  Resources  |  Skills  |  Action Plan  |  Confusion

Vision  |  Incentives  |  Resources  |  Skills  |  Action Plan  |  Gradual Change

Vision  |  Incentives  |  Resources  |  Skills  |  Action Plan  |  Frustration

Vision  |  Incentives  |  Resources  |  Skills  |  Action Plan  |  Anxiety

Vision  |  Incentives  |  Resources  |  Skills  |  Action Plan  |  False Starts

Source: Delorese Ambrose, in 1987 personal communication to TransPlant personnel. Originally from the Enterprise Corporation, a consulting firm no longer in existence.
Preparation for IPv6 deployment

- **Think Globally**
  - Vision/Goals/Architecture/Investment Strategy
  - Communicate, Communicate

- **Act Locally**
  - COMMUNICATE, communicate
  - Avoid grand implementation plans/flag days
Preparation for IPv6 deployment
(Corporate or enterprise preparation for any change)

Introductory remarks—

- In the slides that follow, replace the phrase “DREN IPv6 Pilot” with “Corporate planning team” or “Enterprise implementation group” or “Company deployment committee”, as appropriate to your situation.

- In the slides that follow, the term enclave/site may not directly apply to your situation. Substitute the term branch, office, division, or other organizational unit, as appropriate to your situation.
Preparation for IPv6 deployment
(Corporate or enterprise preparation for any change)

7 steps in planning a successful change:

1. Define problem, solution, and scope for planning
2. Decide on a transition strategy
3. Characterize adopters
4. Identify effective transition mechanisms
5. Select and synthesize
   - refine scope and strategy
   - design interactions among adopters
   - refine whole product
   - set priorities for action
6. Prepare to manage risk
7. Document the plan

Preparation for IPv6 deployment
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Enterprise TransPlant Program planning timeframe:

1. Define Problem
2. Decide on Strategy
3. Characterize Adopters
4. Identify Mechanisms
5. Select and Synthesize
6. Prepare to Manage Risk
7. Document the Plan

Q3 FY03 | Q4 | Q1 FY04

(final draft 9/04)
### Preparation for IPv6 deployment

(Corporate or enterprise preparation for *any* change)

**Enterprise TransPlant Program planning activities:**

<table>
<thead>
<tr>
<th>Model</th>
<th>DREN IPv6 pilot</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Decide on a transition strategy.</td>
<td>Starting now, take all of FY04 to accomplish in stages by site.</td>
</tr>
<tr>
<td>3. Characterize adopters.</td>
<td>Start with R&amp;D community where future systems are developed. Then extend to testers and evaluators.</td>
</tr>
</tbody>
</table>
Preparation for IPv6 deployment

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Enterprise TransPlant Program planning activities:

Model

4. Identify effective transition mechanisms.

DREN Ipv6 pilot

Products = DREN IPv6 pilot

Commitment = HPCMP policy, personal on-site visits, competitive advantage for early adopters.

5. Define desired end state; select and synthesize.

DREN WAN and small sites, then HPC centers, then user sites. All earlier lessons learned available to later sites via HPC community web site. As applications are converted, plans are refined.
**Preparation for IPv6 deployment**

*(Corporate or enterprise preparation for *any* change)*

Enterprise TransPlant Program Planning activities:

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<td>6. Prepare to manage risk.</td>
<td>Network security for pilot will be at least a good as IPv4-pnly network. At a site, if something doesn’t work, reversion to pre-pilot IPv4 environment is practical and known to work.</td>
</tr>
</tbody>
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