Conclusions

"It has been said that democracy is the worst form of government except all the others that have been tried."  Winston Churchill

<table>
<thead>
<tr>
<th>Java EE</th>
<th>Fusion Middleware</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gigantic</td>
<td>Huge</td>
</tr>
<tr>
<td>Impossible</td>
<td>Complex</td>
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<tr>
<td>Total chaos</td>
<td>Too many alternatives</td>
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<tr>
<td>Viral mutation</td>
<td>Rational evolution</td>
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</tbody>
</table>
1. Select a small subset of products.
2. Get help.
3. Start small.
What parts of Fusion Middleware are people using?

- **Last year:**
  - ADF BC
  - ADF Faces
  - BPEL
  - Oracle Application Server (OAS)
  - Less popular: JHeadstart, Oracle Business Rules, WebCenter

- **This year:**
  - BPEL – less popular
  - OAS- Soon to be replaced with BEA WebLogic
Connecting Java to the Database

- Leading cause of project failure
- Alternatives
  - Hibernate
  - TopLink
  - EJB, EJB3 (write your own)
  - JDBC code (no framework)
  - ADF BC
ADF BC

- **BEST**
  - Way to connect to the database

- **MATURE**
  - Version 1 released in 2001
  - 4 major rewrites

- **STABLE**
  - The major evolution is over.

- **RICH**
  - Lots of functionality

- **EASY**
  - Compared to alternatives
ADF Faces

- Rich UI components
  - AJAX features
- Based on industry standard Faces
- Evolving
  - Lots of new things in 11g
  - Totally new Controller in 11g
  - Better rich UI page development
Application Server

- Oldest and most stable portion of the Oracle architecture.
- Widely used
- BEA WebLogic will soon replace
  - No one seems to be in a hurry to jump on this bandwagon.
  - Most organizations are still staying with their OAS installations.
BPEL

- Process flow engine
  - Middle tier
  - Java-based
- Industry standard
- Oracle BPEL is excellent.
- Not many organizations using it.
Other Parts of Fusion Middleware

- **Oracle Business Rules**
  - Last year, one person I talked to tried and failed.
  - This year, one person was successful building a very unique application.

- **JHeadstart**
  - Designer-like code generation
  - Easier to learn
  - Mostly used by Oracle Consulting
    - Some external users
    - Few new users but existing users are happy.

- **Universal Content Manager (UCM)** – few users

- **Identity Management Suite** – lots of interest, very new
WebCenter

- Bundle of collected utilities
  - Instant messaging
  - Wiki
  - Portal (any JSF is a portlet)
- Early releases were weak
- Users now happy
- Very expensive ($50,000/CPU)
BI Publisher

- Reporting tool
- Still not Oracle Reports
- Expensive ($30,000)
SOA

- To SOA or not to SOA?
- Overrated bandwagon
- High cost, high risk
- Frequently not necessary
- Will consume more resources than you think
  - In one system: 2% of requirements, 15% of maintenance
- Can be difficult to control and maintain web services.
Hardware Requirements

- Hardware requirements for Java EE (and ADF specifically) can be prohibitively expensive.
  - Scalable application to many OO architects often means one in which performance problems can be solved by adding additional hardware.
  - Even systems with 1000 users or less may require multiple servers to support this environment.
  - Recent trend is to use a middle tier deployed on Virtual Machines (VM).
    - Some cost savings and easier maintenance
What can you build?

1) Basic applications
   - ADF BC
   - ADF Faces
   - OAS

2) SOA management
   - BPEL
   - OAS

3) Process flow applications
   - ADF BC
   - ADF Faces
   - OAS
   - BPEL
Development Thoughts

- Steep learning curve
- Mentoring is essential.
- Slowly getting easier
"It ain't Forms"

- More complex
- Slower development
- Harder to learn
- Less functional

- Web-based
- Better looking applications
Making the Web Work

1. Minimize information sent to client
   - Small Pages
   - Not too much logic

2. Minimize round trips to the database
   - Thick database

3. Beware of Web Services
   - Internet bottlenecks are unpredictable.
Stateful or Stateless?

**Stateful**
- 1 database, 1 application server session for entire logical session
- BEWARE large number of users
  - May need 200 servers
- Most applications are stateful.

**Stateless**
- Every UI operation reconnects independently (no persistent package variables or GTT)
- Essential for large number of users
  - Only 2 servers for most systems
Is Fusion Middleware Catching On?

- Not really
- Totally fragmented environment
- Applications will drive Fusion Middleware
- APEX
  - Most popular Oracle web development environment
  - Won't pass Defense Department security
  - Good if you stay “within the box”
Conclusions

- Java EE is very complex.
- Fusion Middleware makes complexity manageable.
- Tier 1 shops are productive and happy
  - No one thinks open source is better.
- Fusion Middleware continues to improve.
- Oracle Applications will all be Fusion Middleware
  - We may have no choice.
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  - Write “BRIM” on business card
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Latest book:
Oracle PL/SQL for Dummies