Distributed Architecture Definition Language
DADL
Ron Burbank
November, 1998

SMTP based Electronic Email

What is the Problem?
- Architectures are defined with a few drawings, hand waving arguments, and English based document
- Not precisely defined
- Traditional programming languages concentrate on algorithms and data structures

The Solution?
- We need a language that can describe distributed architectures.
- Extension to existing programming languages.
- DADL (Distributed Architecture Definition Language)

Architecture Definition
- The components and their interfaces, communication, and contractual behavior.
- Traditional programming languages concentrate on algorithms and data structures which define the components but do very little at defining interfaces, communication, and contractual behavior.
Some DADL Concepts

- **Dags** are the components
- A **contract** determines the **resources** and **performance** demands of a dagent
- Terms and sentences build a **conversation** over **connections** which determines the behavior

A DADL Environment

<table>
<thead>
<tr>
<th>DADL sub</th>
<th>DADL sub</th>
<th>DADL sub</th>
<th>DADL sub</th>
</tr>
</thead>
<tbody>
<tr>
<td>Degree 1</td>
<td>Degree 2</td>
<td>Degree 1</td>
<td>Degree 2</td>
</tr>
</tbody>
</table>

DADL Development

- **Dags Sub**
  - Dialogues supplied code
    - Library
- **Conversation Service**
  - Library
- **Dags Application**
  - Library

Example: Plus

- A 3-connection (3, 1, 1)
- 4-byte FIFO guaranteed delivery