

## ***-Introduction :***

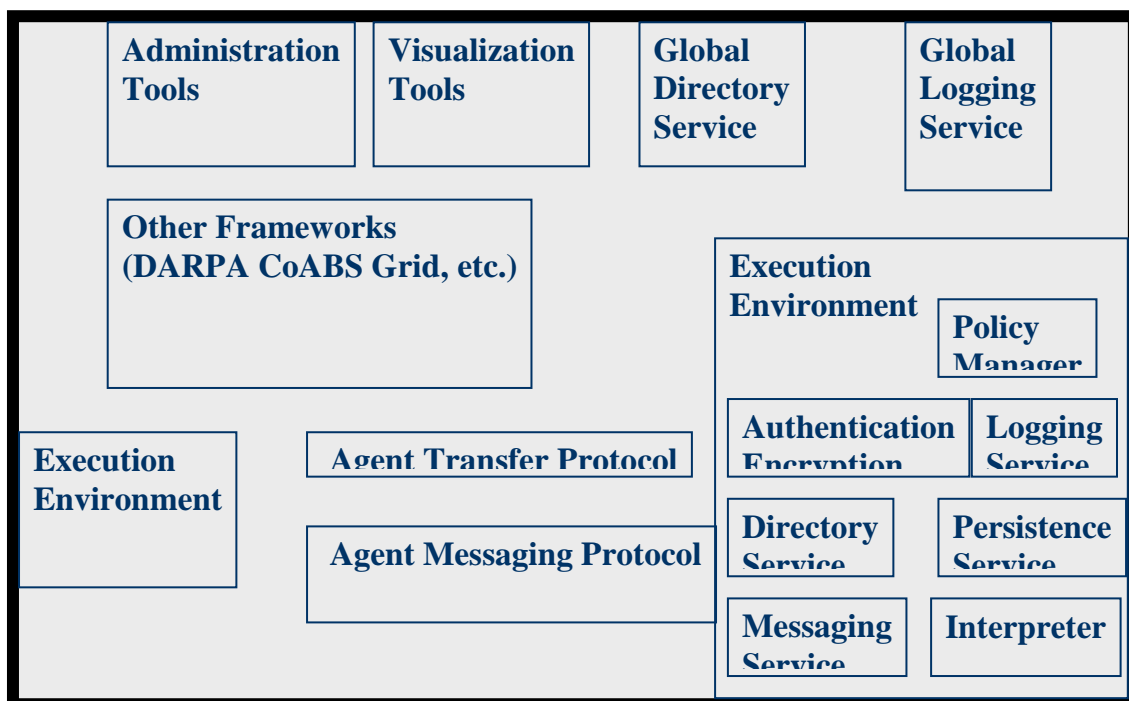
**Rapidly evolving network and computer technology, coupled with the exponential growth of the services and information available on the Internet, will soon bring us to the point where hundreds of millions of people will have fast, pervasive access to a phenomenal amount of information, through desktop machines at work, school and home, through televisions, phones, pagers, and car dashboards, from anywhere and everywhere. Mobile code, and in particular mobile agents, will be an essential tool for allowing such access.**

## ***-Mobile Agent Definition :***

**Mobile agents are programs that can migrate from host to host in a network, at times and to places of their own choosing. The state of the running program is saved, transported to the new host, and restored, allowing the program to continue where it left off.**

**Mobile-agent systems differ from process-migration systems in that the agents move when they choose, mobile agents are active in that they can choose to migrate between computers at any time during their execution. This makes them a powerful tool for implementing distributed applications in a computer network. .Whereas in a process-migration system the system decides when and where to move the running process (typically to balance CPU load).**

***-System Component:***



## ***-Reputation & Trust :***

**The following are general concerns about the Trust and Reputation in Mobile Agent research area:**

### **1. Source of trust information**

- Direct experience**
- Witness information**
- Role-based rules**
- Third-party references**

### **2. How trust value is calculated**

### **3. Overall trust value**

**Note that the difference between trust and reputation system is that trust systems produce a score that reflects the relying party's subjective view of an entity's trustworthiness, whereas reputation systems produce an entity's (public) reputation score as seen by the whole community.**

## ***-Advantages :***

**Some advantages which mobile agents have over conventional agents:**

- **Computation bundles - converts computational client/server round trips to relocatable data bundles, reducing network load.**
- **Parallel processing -asynchronous execution on multiple heterogeneous network hosts .**
- **Dynamic adaptation - actions are dependent on the state of the host environment .**
- **Tolerant to network faults - able to operate without an active connection between client and server .**
- **Flexible maintenance - to change an agent's actions, only the source (rather than the computation hosts) must be updated .**
- **Reducing network bandwidth .**

**One particular advantage for remote deployment of software includes increased portability thereby making system requirements less influential.**

## ***-Application of Mobile Agents :***

**Common applications include:**

- **Resource availability, discovery, monitoring**
- **Information retrieval, system information collection, support operations in client/server paradigm**
- **Network management, remote collection of network throughput, available bandwidth monitoring, other remote machine network parameters**
- **Data replication and colation, server configuration backup, file collecting & sorting, other remote machine data backup .**
- **Dynamic software deployment, remote install monitoring & gauging**

## ***-Conclusion :***

**There is a strong case for the use of mobile agents in many Internet applications. Moreover, there is a clear evolutionary path that will take us from current technology to widespread use of mobile code and agents within the next few years. Once several technical challenges have been met, and a few pioneering sites install mobile-agent technology, use of mobile agents will expand rapidly .**

## ***references:***

- \* Mobile Agents and the Future of the Internet,  
By David Kotz and Robert S. Gray .**
- \* Mobile Agents ,by Nirangan Suri ,university of west  
florida.**