



# Enterprise Temporal Web Services in Disaster Management Planning

ESRI Federal User Conference 10 JAN 2006

# Problem Statement



- Major Natural Disaster



# Problem Statement - Needs



- Communication
  - Ground based
  - Satellite
- Commercial imagery support
- Integration into Enterprise Architecture

A screenshot of a web browser window displaying XML data. The address bar shows the URL: http://softwareservices.agi.com/StkWebServices/Stkwebservice.asmx/GetTrackData... The browser interface includes a menu bar (File, Edit, View, Favorites, Tools, Help), a toolbar with navigation buttons (Back, Forward, Home, Stop, Refresh, Search, Favorites), and a status bar at the bottom showing 'Done' and 'Local intranet'. The main content area displays XML code with red and blue text. The XML is an XML Schema instance for an ArrayOfLLA, containing four LLA (Latitude, Longitude, Altitude) entries for different times on September 21, 2006.

```
<?xml version="1.0" encoding="utf-8" ?>
- <ArrayOfLLA xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="http://tempuri.org/STKWebService/STKWebService">
- <LLA>
  <UTCSTime>21 Sep 2006 00:00:00.000000000</UTCSTime>
  <Latitude>-0.014980096218804374</Latitude>
  <Longitude>108.19089428942557</Longitude>
  <AltitudeInFeet>117397897.15656623</AltitudeInFeet>
</LLA>
- <LLA>
  <UTCSTime>21 Sep 2006 00:10:00.000000000</UTCSTime>
  <Latitude>-0.014984527716494191</Latitude>
  <Longitude>108.19127348706392</Longitude>
  <AltitudeInFeet>117398045.32520074</AltitudeInFeet>
</LLA>
- <LLA>
  <UTCSTime>21 Sep 2006 00:20:00.000000000</UTCSTime>
  <Latitude>-0.014960358616127982</Latitude>
  <Longitude>108.19164686563833</Longitude>
  <AltitudeInFeet>117398218.40149149</AltitudeInFeet>
</LLA>
- <LLA>
  <UTCSTime>21 Sep 2006 00:30:00.000000000</UTCSTime>
  <Latitude>-0.014907668082591126</Latitude>
  <Longitude>108.19201352802753</Longitude>
  <AltitudeInFeet>117398416.06016122</AltitudeInFeet>
</LLA>
- <LLA>
  <UTCSTime>21 Sep 2006 00:40:00.000000000</UTCSTime>
```

- Application accurately analyzes dynamic objects in real or simulated time
  - Realtime
    - Reacting to an event
  - Modeled
    - Analytical mode (pre and post event)

- AGI Technology Demonstration
  - Hurricane Katrina Scenario

# AGI basics



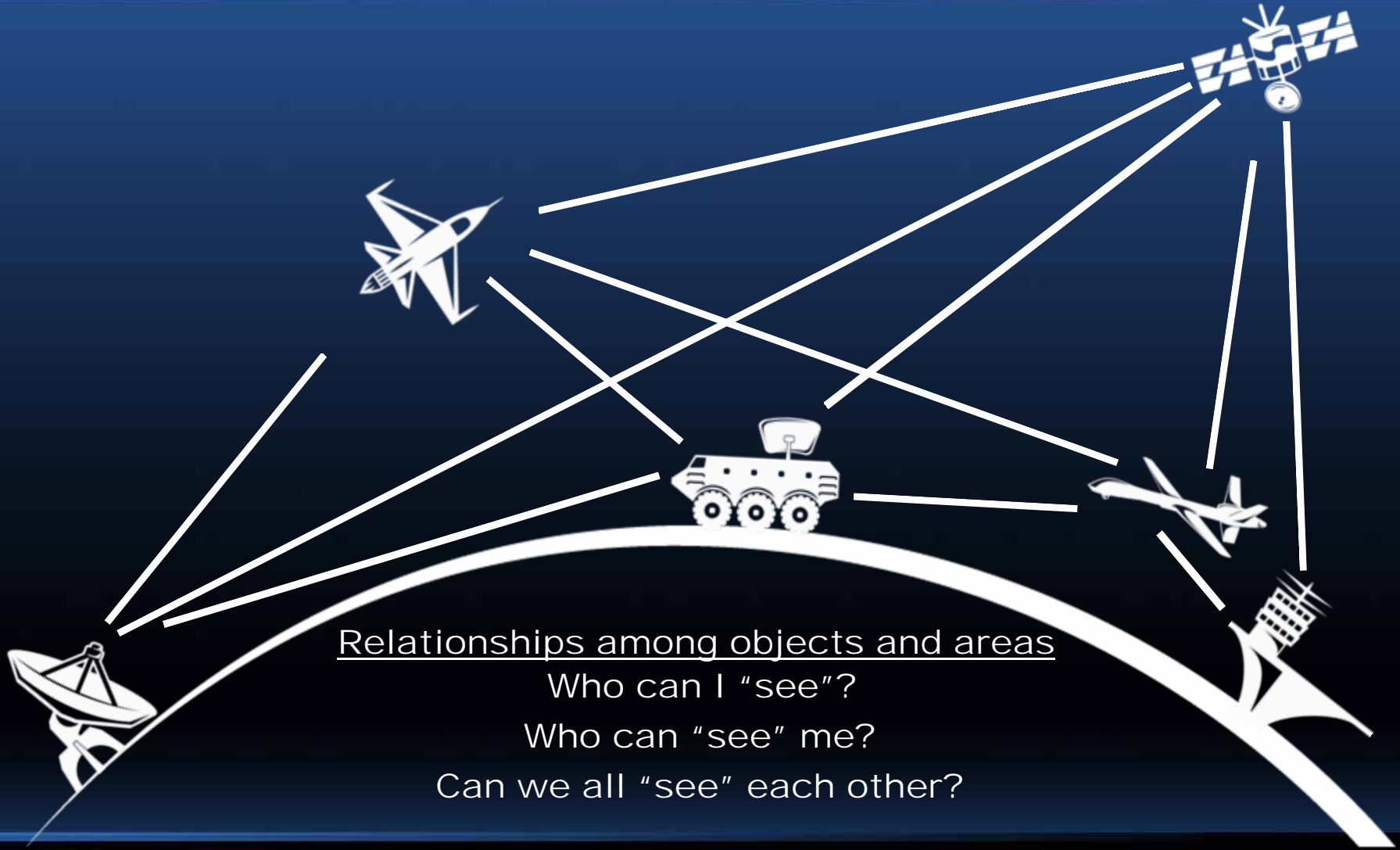
Time-dynamic position and attitude

Where am I now?

Where will I be?

How am I oriented?

# AGI basics



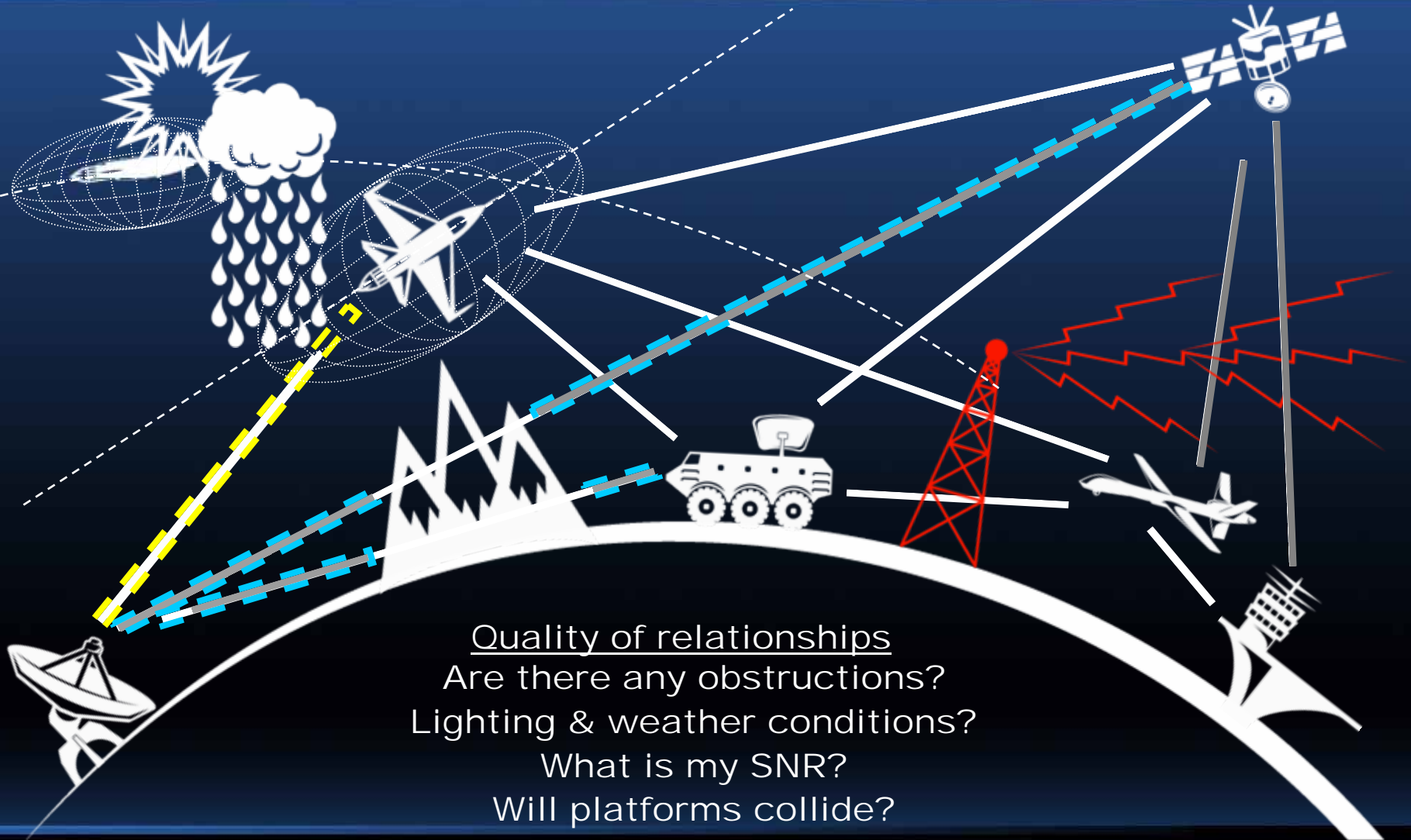
Relationships among objects and areas

Who can I "see"?

Who can "see" me?

Can we all "see" each other?

# AGI basics



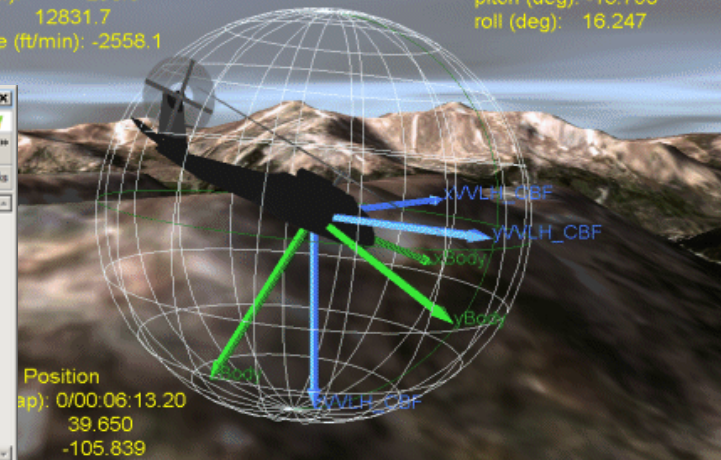
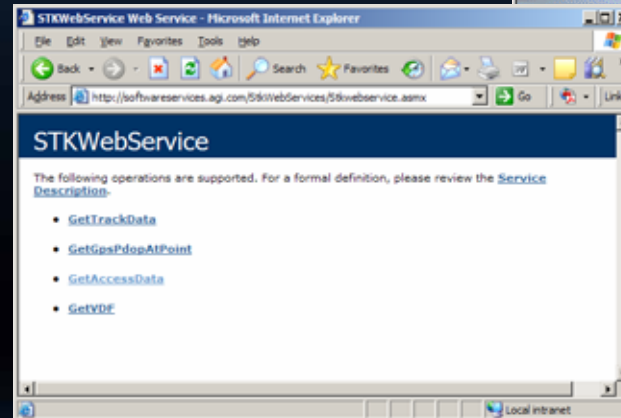
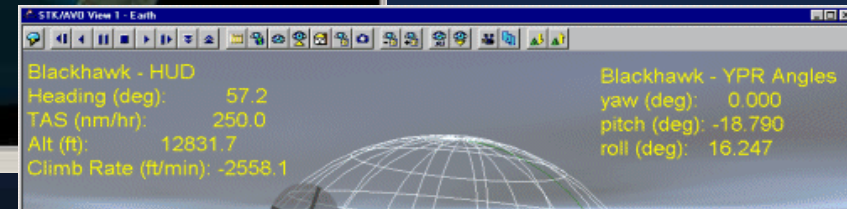
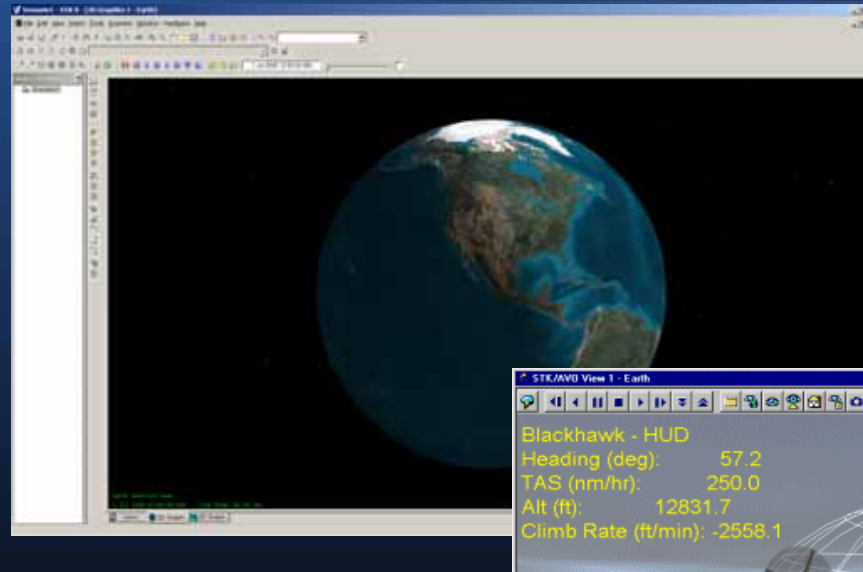
Quality of relationships  
Are there any obstructions?  
Lighting & weather conditions?  
What is my SNR?  
Will platforms collide?



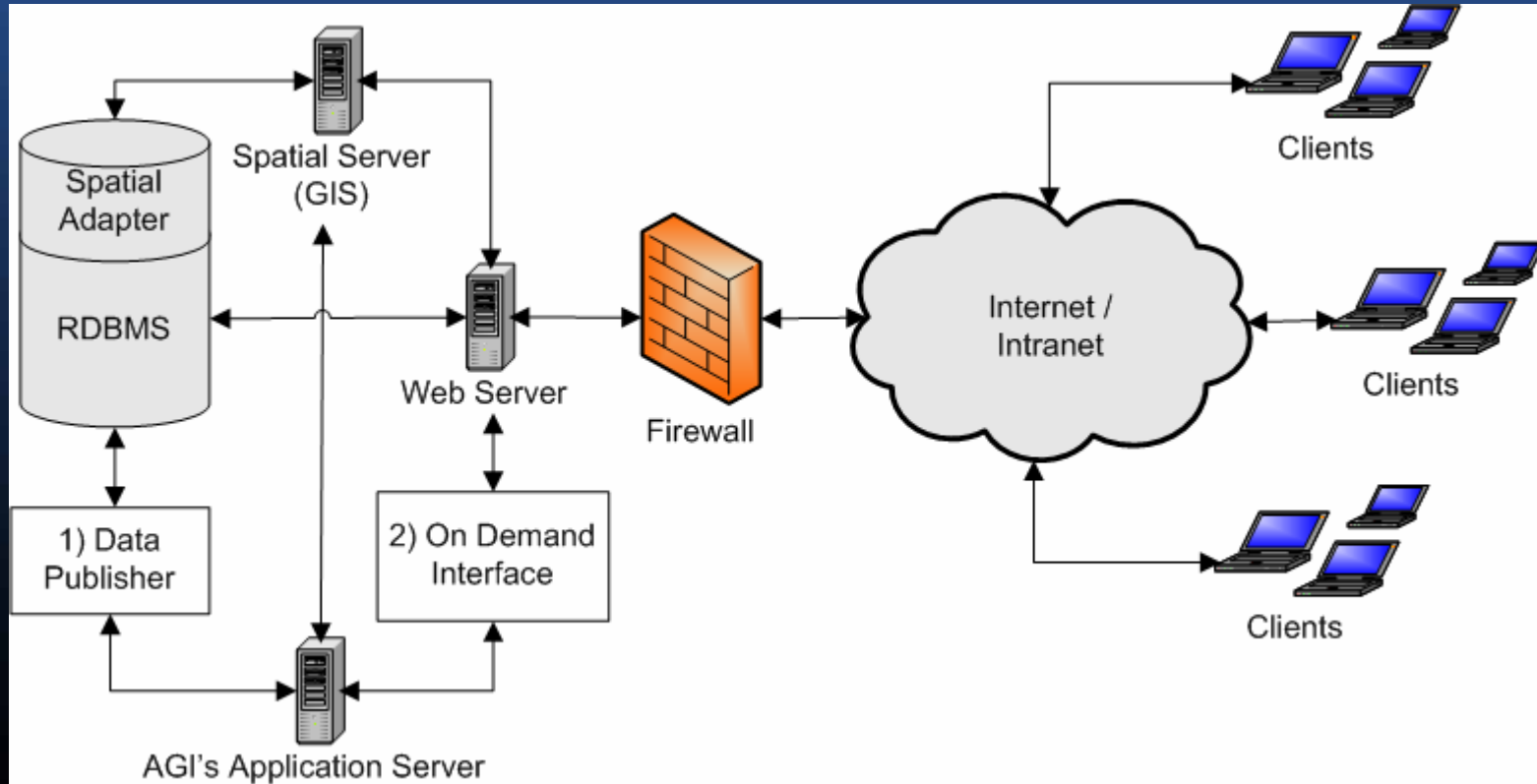
# AGI Technology Modes



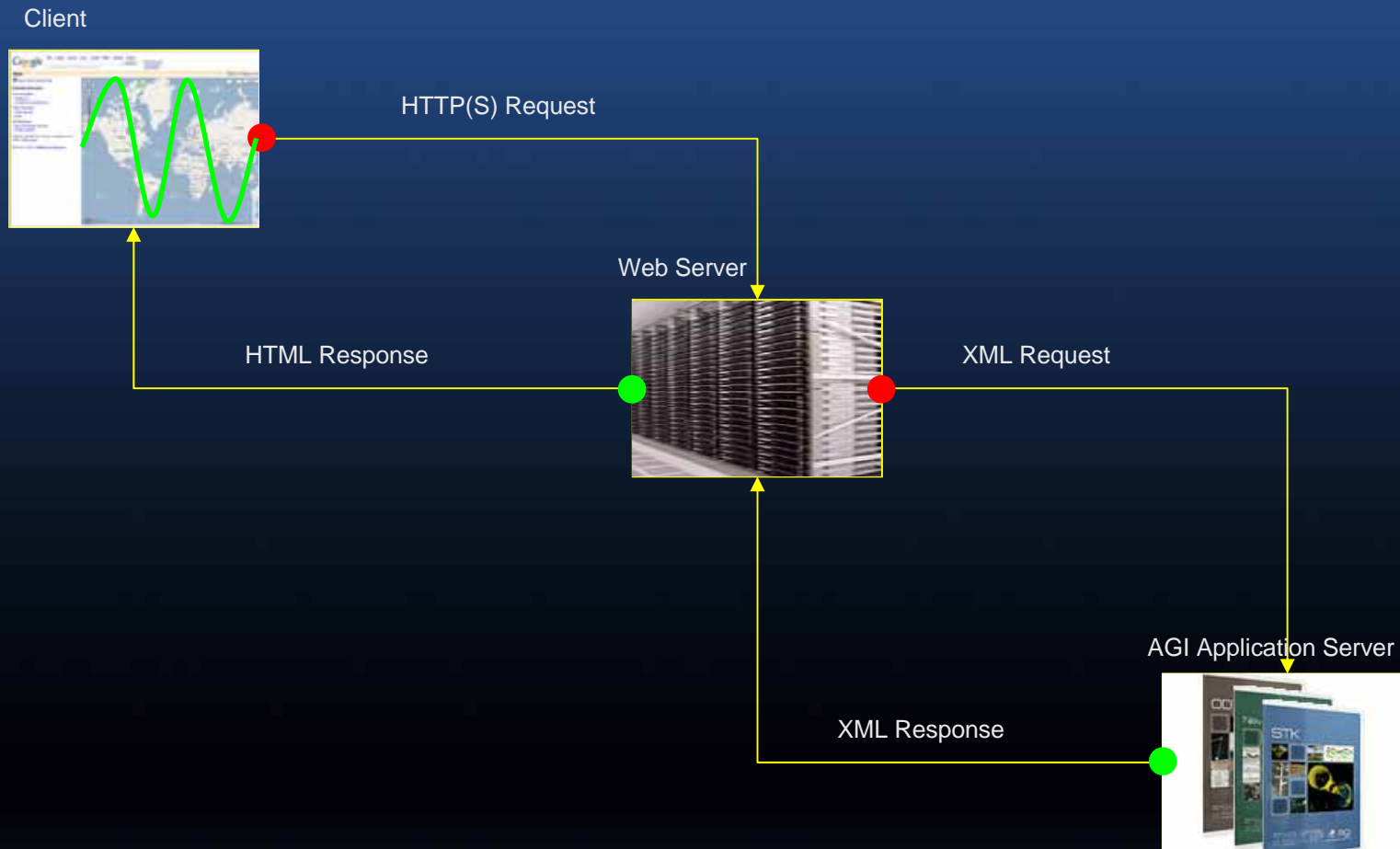
- Desktop
- Integrated
- Server



# Example AGI SOA



# Sample Web Service



# Real world implementation



- Robert Marsters – GeoDecisions
- FEMA / IRRIS Demo

# Questions?



- Contact Info

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