

# UNITE 2002 Technology Conference

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## Turning ClearPath MCP COMS Transactions into Web Services

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MGS, Inc.

Session AS4055

10:30am - 11:30am

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# Who is MGS, Inc.

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- Software Engineering, Product Development & Professional Services firm founded in 1986
- We provide products and services to solve business problems:
  - **Software Engineering Services**
  - **Professional Services**
    - ❖ **Management Support Services**
    - ❖ **Consulting and Technical Services**
    - ❖ **Application Development Services**
    - ❖ **Training Services**
  - **Product Development**

# MGS Areas of Expertise

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- Principals average over 25 years industry experience
- Junior staff - minimum 5 years experience
- 60% of experience is Unisys ClearPath NX/A Series
- Remainder is PC, Windows<sup>TM</sup>, UNIX, C, Delphi, VB, LAN/WAN...

# MGS Software Products

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- File Manager for ClearPath MCP/A Series (FMA)
- SightLine™ Performance Analyzer
- SightLine Capacity Manager
- SightLine Workload Analyzer
- HVFAX High Volume Facsimile Delivery System
- Proof of Correctness System (PCS)

# Web Services - Overview

- Major players
  - Microsoft
  - HP
  - IBM
  - Sun
- Goal
  - Make Internet program-to-program exchanges as easy as browsing the Web



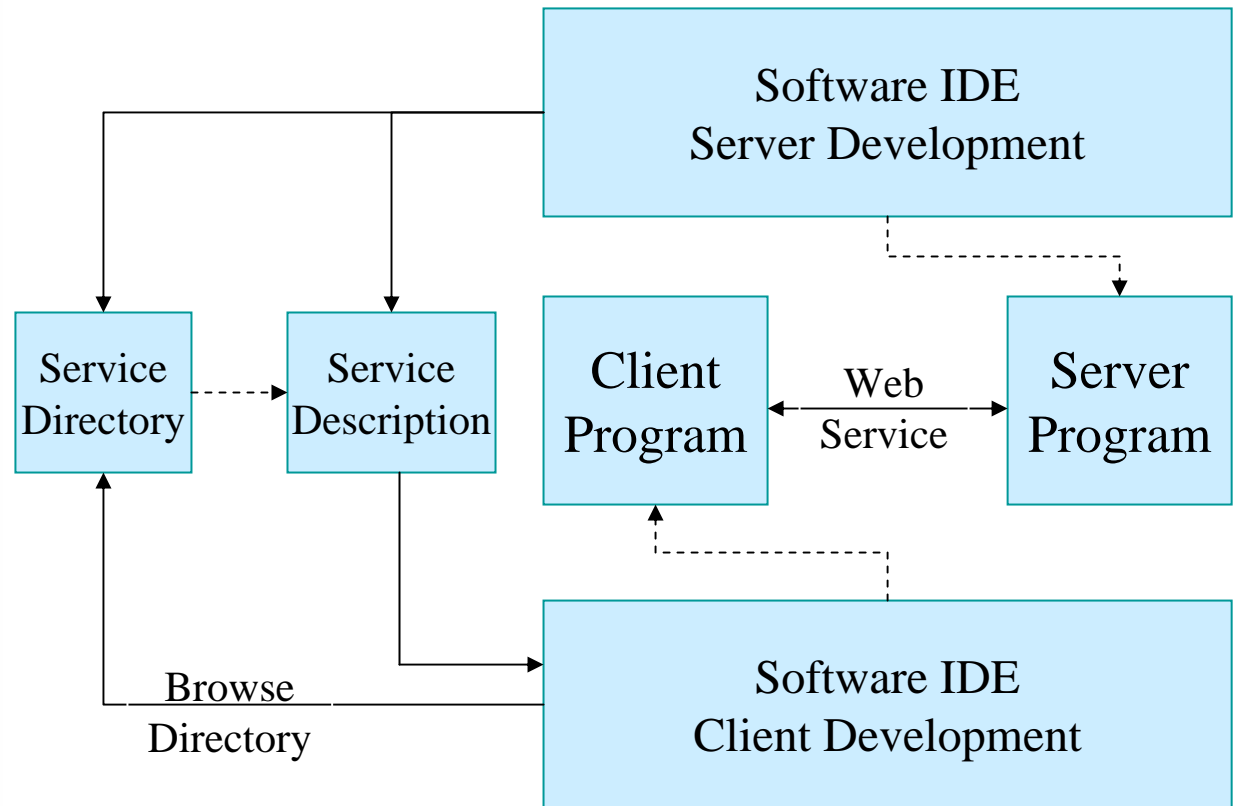
# Web Services - Overview

- The Web Services concept contains extremely powerful elements:
  - Simple, well-defined, standards-based interface
  - Technology independent implementation
  - Each set of services has a description file
  - Integrated directory of service descriptions and documentation
  - Provides the ability to:
    - ❖ Componentize new Enterprise business functions
    - ❖ Encapsulate existing business functions for easier access

# Web Services - Overview

- Supported by software IDEs
  - Discovery of service
  - Automatic creation of Web Services client objects
  - Web Services Server object support
    - ❖ Description file generation
    - ❖ Directory update
    - ❖ Server program code
  - Included as part of the application framework
    - ❖ Microsoft .NET
    - ❖ Sun Microsystems J2EE

# Web Services - Overview

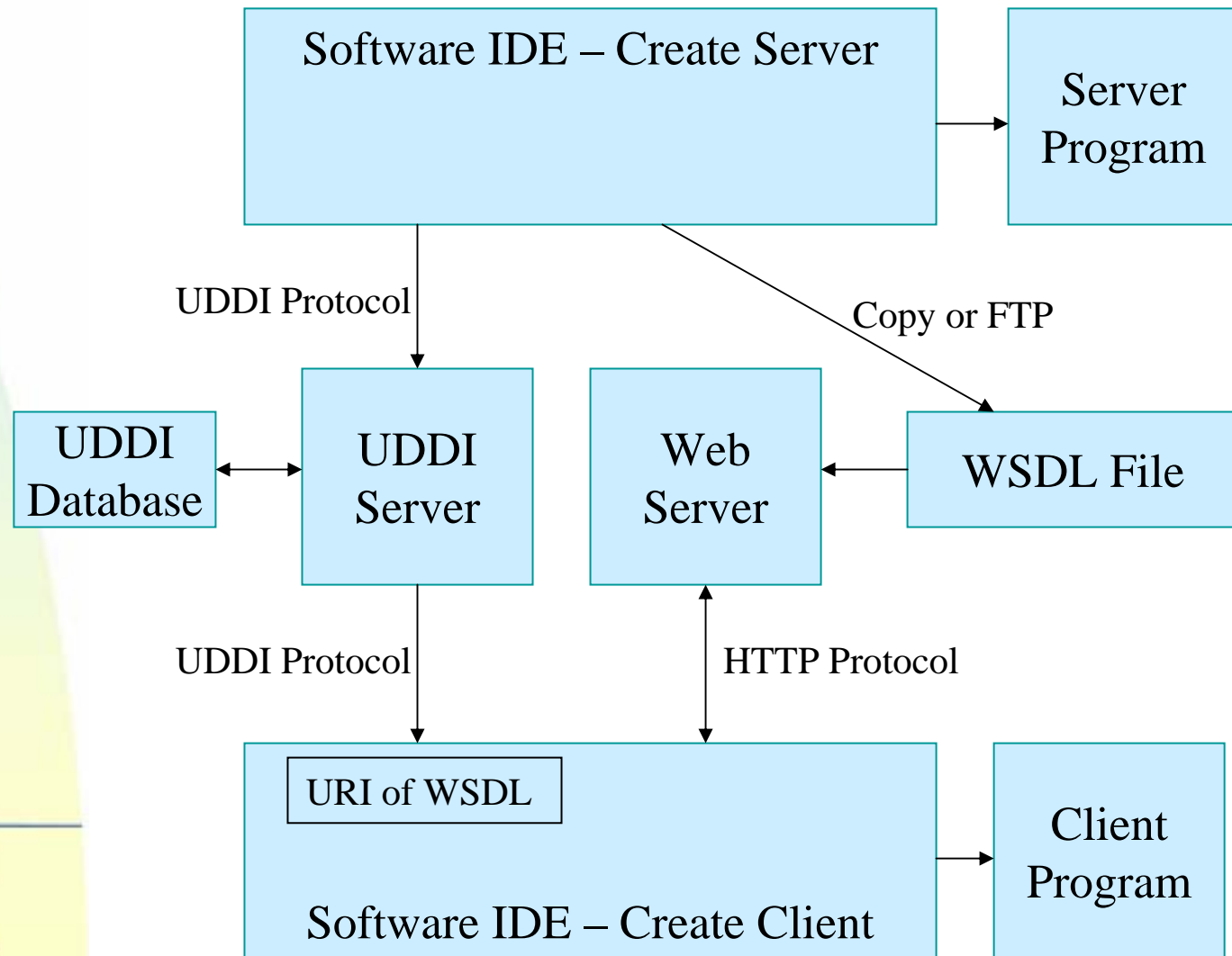




# Web Services- WSDL & UDDI

- Directory contains Web Service description and documentation
  - **UDDI** – Universal Description, Discovery and Integration
  - **WSDL** – Web Services Description Language
- UDDI specifies WSDL location with a URI
  - For use with HTTP
  - Includes web server host name
  - Includes WSDL file name

# Web Services- WSDL & UDDI



# Web Services- WSDL & UDDI

## WSDL File Excerpt:

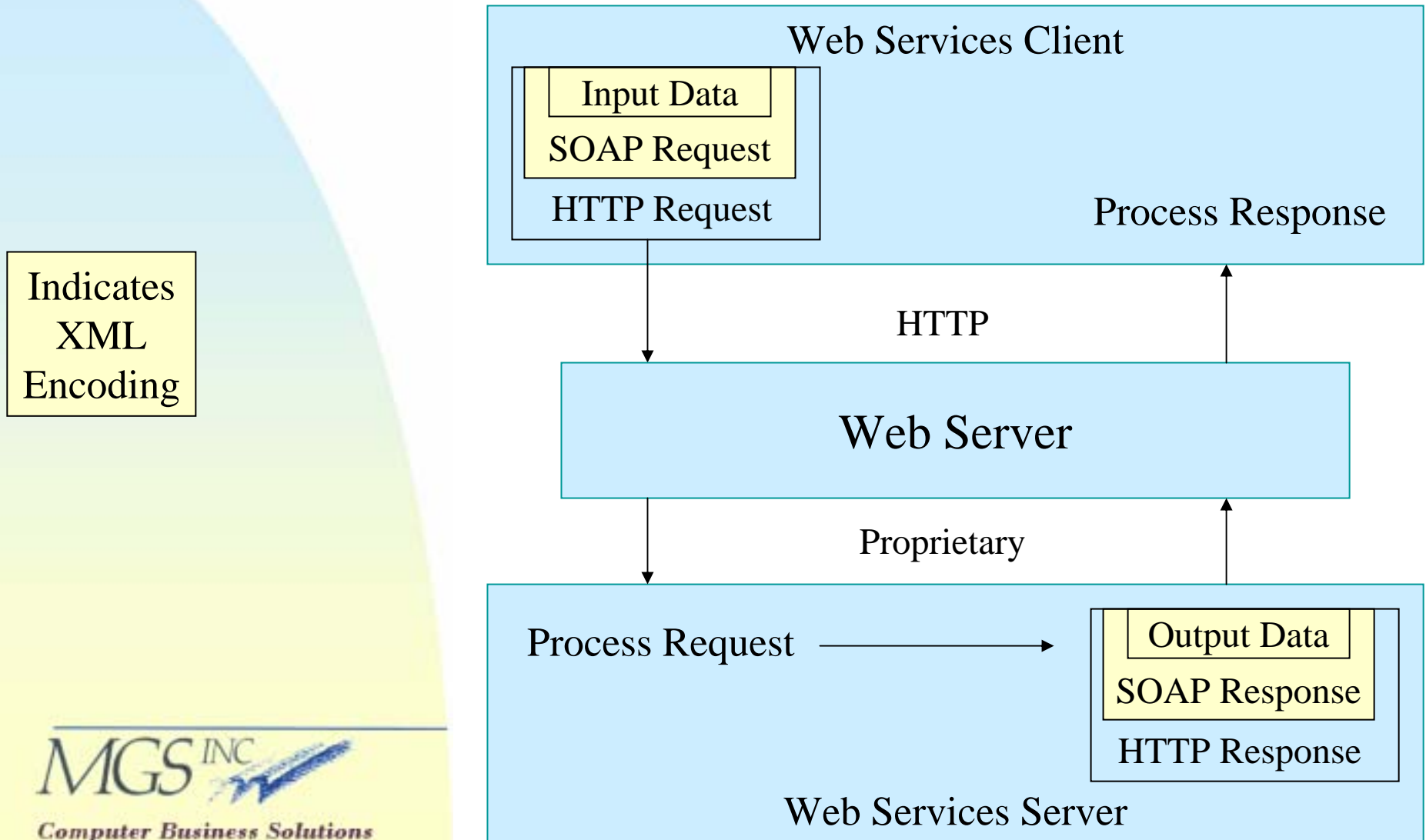
```
<message name="WSTEST_SCRN01">
  <part name="Trancode" type="xsd:string" />
  <part name="Input_data" type="xsd:string" />
</message>
<message name="WSTEST_SCRN01Response">
  <part name="Trancode" type="xsd:string" />
  <part name="Input_data" type="xsd:string" />
  <part name="statusLine" type="xsd:string" />
</message>

<service name="COMSWebServices">
  <documentation>Access COMS applications via Web Services
  </documentation>
  <port name="WSTEST" binding="wsdl:WSTESTHttpBinding">
    <soap:address location="http://laptop1mcp/COMSWebServices/" />
  </port>
</service>
```

# Web Services – SOAP

- Web Services is built on Internet communications standards
  - **HTTP** – HyperText Transfer Protocol
  - **SOAP** – Simple Object Access Protocol
  - **XML** – eXtensible Markup Language
- Web service is addressed with the server's URI obtained from the WSDL

# Web Services – SOAP



# Web Services – SOAP

## SOAP Request:

```
<soap:Envelope>  
  <soap:Body>  
    <tns:WSTEST_SCRN01>  
      <Trancode>SCRN01</Trancode>  
      <InputData>lower case letters</InputData>  
    </tns:WSTEST_SCRN01>  
  </soap:Body>  
</soap:Envelope>
```

## SOAP Response:

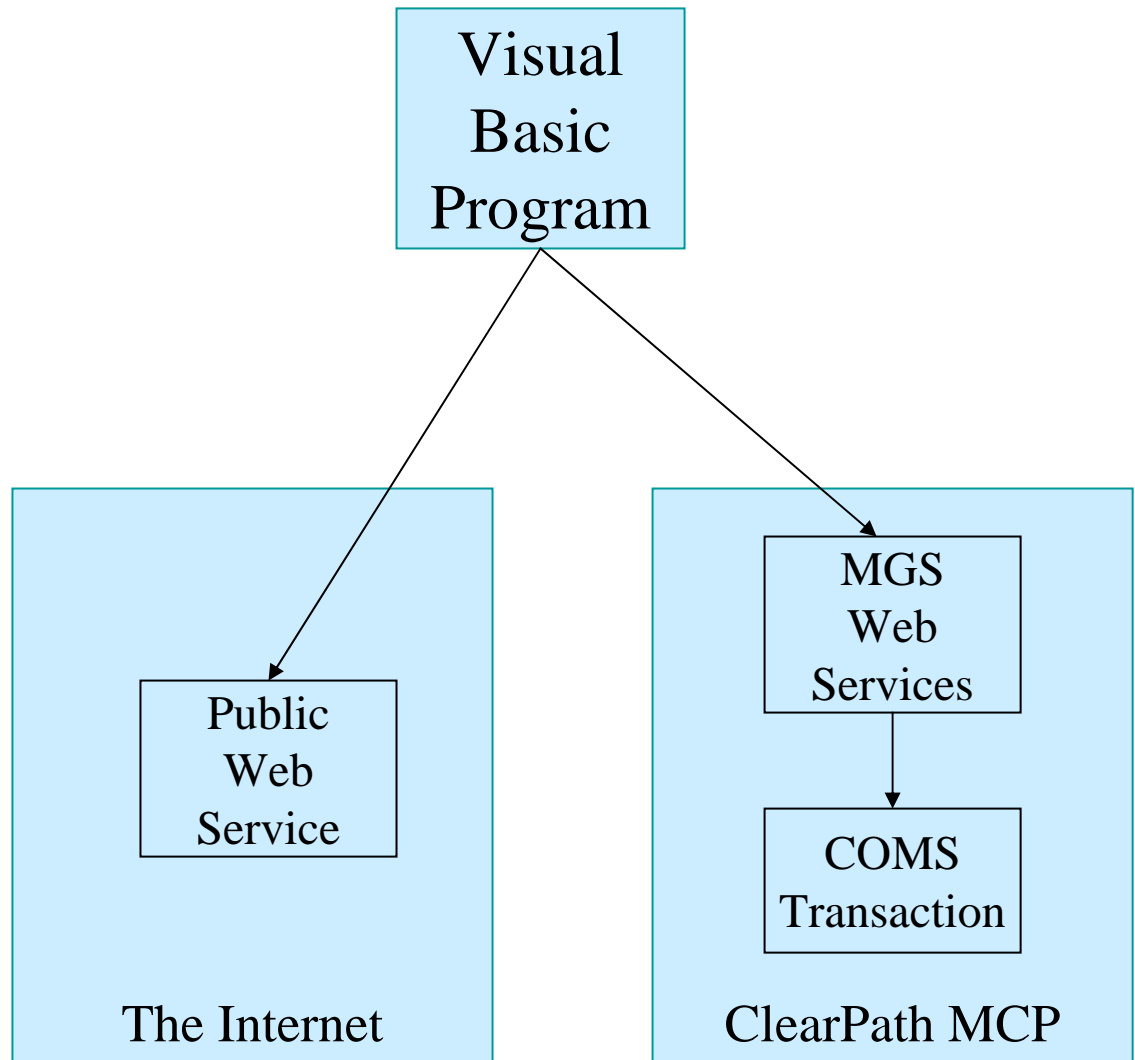
```
<soap:Envelope>  
  <soap:Body>  
    <tns:WSTEST_SCRN01Response>  
      <Trancode>SCRN01</Trancode>  
      <InputData>LOWER CASE LETTERS</InputData>  
      <statusLine />  
    </tns:WSTEST_SCRN01Response>  
  </soap:Body>  
</soap:Envelope>
```

# Demonstration

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- Turning a ClearPath MCP COMS transaction into a Web Service
  - Capture the COMS transaction
  - Create the Web Service
  - Deploy the Web WSDL
  - Deploy the Web Service
  - Use UDDI to search for an service on the Internet
  - Create a Visual Basic program that uses both the Internet and COMS Web Services
  - Run the program

# Demonstration





# Demonstration

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- Get additional value by using Web Services to
  - Serve up data for browser transactions
    - ❖ Run browser to access generated HTML for demo Web Service
    - ❖ Run DreamWeaver to edit the generated HTML
  - Serve up data directly from a DMSII database

# Additional Questions?

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