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## **XGantt Workshop 2**

# **Web Applications Using XGantt ActiveX, .NET and ASP.NET**

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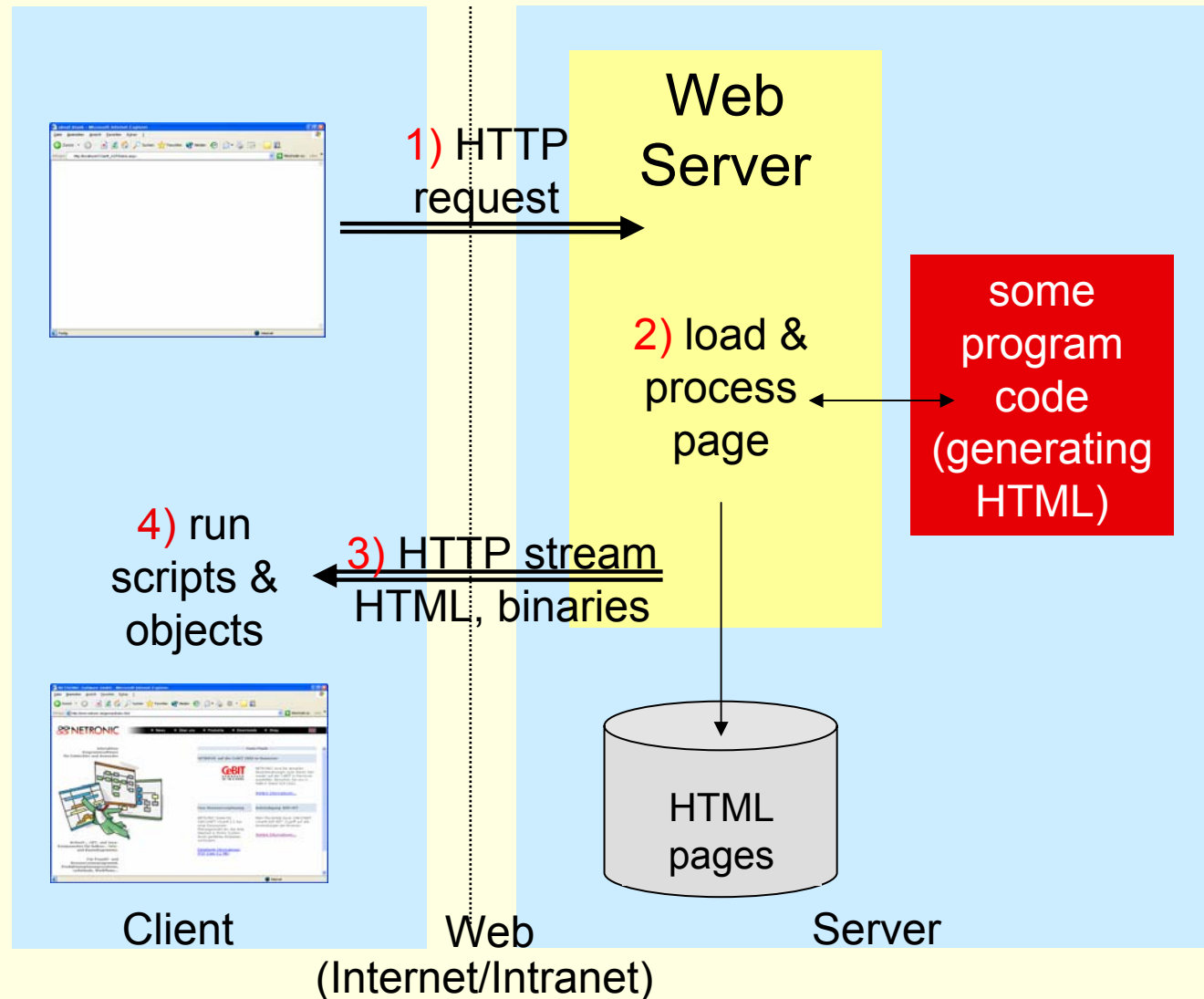
**Dieter Temme  
Jürgen Theis**

# What are Web Applications?

## Overview

Server Side Graphics  
- XGantt ASP.NET

Client Side Graphics  
- XGantt .NET  
- XGantt ActiveX



# Possible Scenarios Using XGantt

## Overview

### Server Side Graphics

- XGantt ASP.NET

### Client Side Graphics

- XGantt .NET
- XGantt ActiveX

- **Server Side Graphics**

- XGantt running on server side
- platform independent on client side
- „screen shots” as image files or streams
- interaction less comfortable

- **Client Side Graphics**

- XGantt running on client side
- full interaction capabilities
- huge data transfer (application data, the control itself and its settings)

# Server Side Graphics Using XGantt ASP.NET

Overview

**Server Side Graphics**

- **XGantt ASP.NET**

Client Side Graphics

- XGantt .NET

- XGantt ActiveX

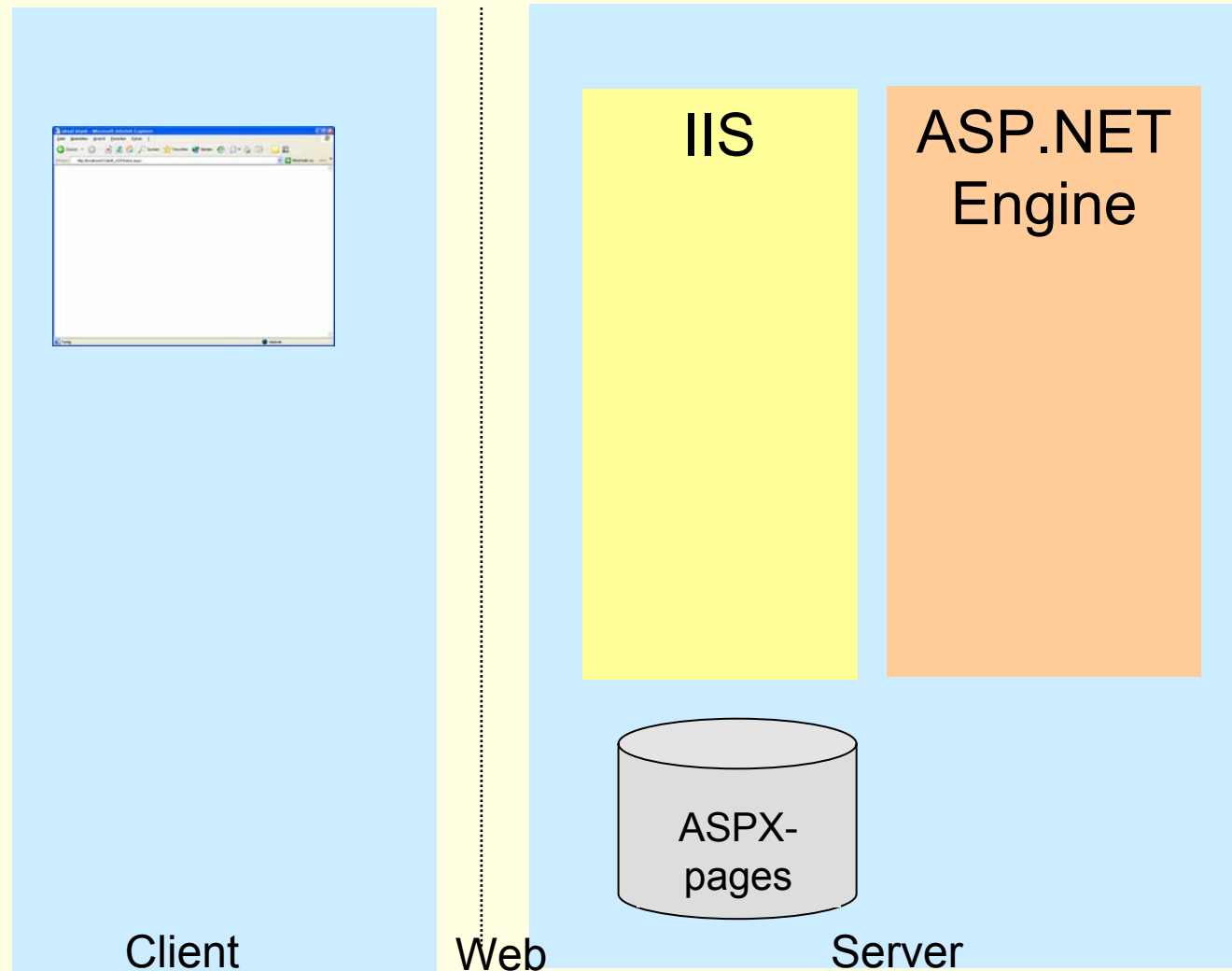
- **XGantt ASP.NET is a web server control**
- **Requirements on server side**
  - MS Windows 2000 Server or MS Windows Server 2003
  - Internet Information Server 5.0 or higher
  - .NET Framework 1.1
- **Requirements on client side**
  - any HTML browser running JavaScript
  - **nothing else!**

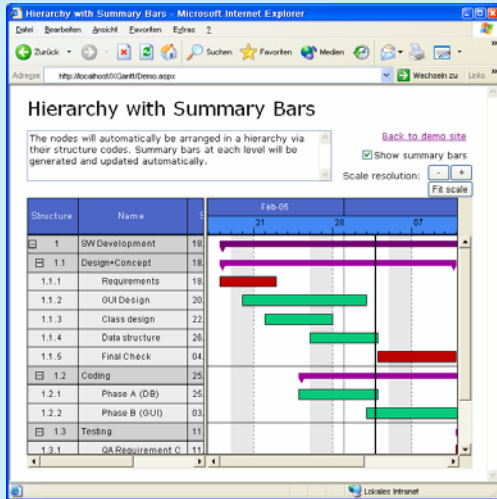
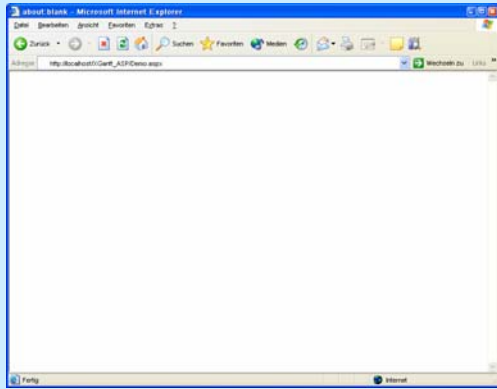
# Concept - Requesting ASPX Pages

## Overview

### Server Side Graphics - XGantt ASP.NET

### Client Side Graphics - XGantt .NET - XGantt ActiveX





1) request  
ASPX page

IIS

?

2) request  
ASPX page

ASP.NET Engine

3) load & parse  
page

4) load, compile  
& run

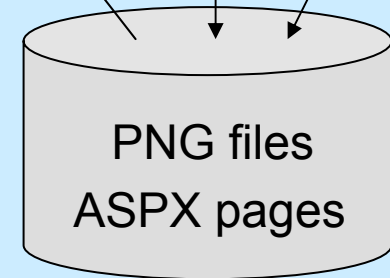
8) unload page  
(XGantt kernel  
resides in session  
state)

XGantt  
ASP.NET

5) save image  
(„screen shots“)

6) generate  
HTML

7) HTTP  
response



# Demonstration of XGantt ASP.NET

Overview

**Server Side Graphics**  
- **XGantt ASP.NET**

Client Side Graphics  
- XGantt .NET  
- XGantt ActiveX

- What are we talking about?  
Some samples (XGantt ASP.NET 3.1): [▶▶](#)

## Details:

- Configuration at design time
- Setting access rights to the ASP.NET user account
- Loading data [▶▶](#)
- SmartNavigation [▶▶](#)
- Editing using standard web server controls [▶▶](#)

# Limitations

Overview

**Server Side Graphics**

- **XGantt ASP.NET**

Client Side Graphics

- XGantt .NET

- XGantt ActiveX

- **Reduced interaction capabilities**
  - no internal dialogs at runtime
  - no in-place editing
  - no drag&drop
  - no context menus
  - no tool tips while moving cursor
- **Reduced set of events**
- **Reduced printing capabilities**
  - printing by some PDF printer drivers (win2pdf and pdf995)
  - no print preview
  - no paging à la XGantt .NET

# Benefits

Overview

**Server Side Graphics**  
- **XGantt ASP.NET**

Client Side Graphics  
- XGantt .NET  
- XGantt ActiveX

- **Thin client**
  - no .NET framework needed
  - no installation required
  - hardly any code to be downloaded
- **Server side programming only**
- **API very similar to API of XGantt .NET (WinForms Edition)**
- **Easy configuration of look-and-feel through powerful property pages**

# Future Developments

Overview

**Server Side Graphics**  
- **XGantt ASP.NET**

Client Side Graphics  
- XGantt .NET  
- XGantt ActiveX

- **Upgrade to the features of each latest .NET edition**
- **Next steps**
  - **Replace writing PNG-files by streaming**
  - **Enhance interactivity by real scroll bars, in-place-editing, ...**
  - **Improve PDF printing facility**

# Decision Matrix – Server Side vs. Client Side Graphics

Application Type	Server Side Graphics	Client Side Graphics	
XGantt Edition	ASP.NET	.NET	ActiveX
Server OS	Windows Server + .NET 1.1	Any	
Client OS	any	Windows + .NET 1.1 (SP1!)	Windows
Web Server	IIS 5.0 or higher	Any	
Web Browser	any + JavaScript	Internet Explorer	
To Do on Server Side	ASP.NET web page	PHP, Perl, ASP, ASP.NET, JSP, or Java servlet...	
To Do on Client Side: HTML Code with...	nothing	embedded in .NET control	VBScript or embedded in ActiveX control
Interactivity	limited	Full	

# Decision Matrix – Server Side vs. Client Side Graphics

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To Do on Client Side: HTML Code with...	nothing	embedded in .NET control	VBScript or embedded in ActiveX control
Interactivity	limited	full	

# Client Side Graphics Using XGantt .NET

Overview

Server Side Graphics  
- XGantt ASP.NET

**Client Side Graphics**  
- **XGantt .NET**  
- XGantt ActiveX

- **Demonstration** [▶▶](#)
- **Requirements on server side**
  - Any server OS with any web server (e.g. LAMP or Windows/IIS/SQLServer/ASP)
- **Requirements on client side**
  - Setting of .NET runtime guidelines
  - Setting of IE security zones

# Client Side Graphics Using XGantt .NET – To Do

## Overview

Server Side Graphics  
- XGantt ASP.NET

**Client Side Graphics**  
- **XGantt .NET**  
- XGantt ActiveX

- **Client application**
  - A Must: Wrapping control, because no .NET events in IE scripting yet
  - HTML page [▶▶](#)
  - XGantt event handling:
    - change requests on any interactive data change
    - update requests in recurrent intervals
- **Server application**
  - Configuration file for assembly download [▶▶](#)
  - Response to all HTTP requests

# Client Side Graphics Using XGantt .NET - Help

Overview

Server Side Graphics  
- XGantt ASP.NET

**Client Side Graphics**  
- **XGantt .NET**  
- XGantt ActiveX

- **Additional Links**

- [MSDN KB 831138](#)  
(why to use .NET 1.1 SP1)
- [MSDN KB 313892](#)  
(view .NET logs in IE)

- **Helpful tools**

- 'gacutil /cdl' (clear .NET download cache)
- [www.tmgdevelopment.co.uk/  
versioncheck.htm](http://www.tmgdevelopment.co.uk/versioncheck.htm) (.NET version checker)

- **Directory for .NET download cache**

c:\Windows\Assembly\Download

# Client Side Graphics Using XGantt ActiveX

Overview

Server Side Graphics  
- XGantt ASP.NET

**Client Side Graphics**  
- XGantt .NET  
- **XGantt ActiveX**

- **Demonstration** [▶▶](#)
- **Requirements on server side**
  - Any server OS with any web server (e.g. LAMP or Windows/IIS/SQLServer/ASP)
- **Requirements on client side**
  - Setting of IE security zones

# Client Side Graphics Using XGantt ActiveX – To Do

Overview

Server Side Graphics  
- XGantt ASP.NET

**Client Side Graphics**  
- XGantt .NET  
- **XGantt ActiveX**

- **Client application**
  - Recommendation: Wrapping control
    - Benefits: no download of INI and IFD files, no “spaghetti code”
    - But: resulting CAB file must be signed!
  - HTML page
  - XGantt event handling:
    - change requests on any interactive data change
    - update requests in recurrent intervals
  - Attention: XGantt events not compatible with JavaScript!
- **Server application**
  - Response to all HTTP requests

# Client Side Graphics Using XGantt ActiveX - Help

Overview

Server Side Graphics  
- XGantt ASP.NET

**Client Side Graphics**  
- XGantt .NET  
- **XGantt ActiveX**

- **Helpful Microsoft tools**
  - cabarc (for packaging CAB files)
  - signcode (for signing OCX and CAB files:  
need to buy a signature e.g.  
at VeriSign!)
  - lpktool (make lpk files for licensed ActiveX  
controls in HTML pages)
  - cdlllogvw (Code Download Log Viewer)



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**Thank you for  
your attention.**

**Any questions?**



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**Additional slides**

# Server Side Graphics

## Using XGantt ActiveX - Requirements

### Overview

Server Side Graphics  
- XGantt ASP.NET

**Client Side Graphics**  
- XGantt ActiveX  
- **XGantt .NET**

### • **Server side**

- MS Windows 2000 Server or MS Windows Server 2003
- Web server with direct or indirect support for OLE automation objects (ASP, ASP.NET, PHP, Perl, CGI...)

### • **Client side**

- Any HTML browser running JavaScript
- **Nothing else!**

# Server Side Graphics

## Using XGantt ActiveX - Details

Overview

Client Side Graphics  
XGantt ActiveX  
XGantt .NET

**Server Side Graphics**  
**XGantt ActiveX**  
XGantt ASP.NET

- No configuration at design time
- Using XGantt as OLE automation object
- Loading data
- Using ASP: Control can reside in Session data
- Setting access rights to the ASP user account
- Editing at run time ONLY by standard web server controls (but much more programming effort necessary than by using XGantt ASP.NET Edition)

# Loading Data (Excerpt of WebForm1.aspx.cs)

```
private void Page_Load(object sender, EventArgs e)
{
    if (this.Page.Session.IsNewSession)
    {
        //Load data
        VcGantt1.InsertNodeRecord (" 1;SW Develo.;" +dateString + ";" +.....);
        VcGantt1.InsertNodeRecord (" 2;Design;" +dateString + ";" +.....);
        VcGantt1.InsertNodeRecord (" 3;Requirem.;" +dateString + ";" +.....);
        VcGantt1.InsertNodeRecord (" 4;GUI Design;" +dateString + ";" +.....);
        ...
        VcGantt1.EndLoading();
    }
    ...
}
```

# SmartNavigation (Excerpt of WebForm1.aspx)

```
<%@ Register TagPrefix="cc1" Namespace="NETRONIC.XGantt.Web"
           Assembly="NETRONIC.XGantt.Web" %>
<%@ Page SmartNavigation=„true“ language="c#"
           Codebehind="WebForm1.aspx.cs" AutoEventWireup="false"
           Inherits="WebApplication1.WebForm1" %>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN" >
<HTML>
...
</HTML>
```

# Editing Data (Excerpt of WebForm1.aspx.cs)

```
private void VcGantt1_VcNodeLeftClicking(object sender,
                                           NETRONIC.XGantt.Web.VcNodeClickingEventArgs e)
{
    this.Session.Remove("ClickedObject");
    this.Session.Add("ClickedObject", e.Node);
    TextBox1.Text=(String)e.Node.get_DataField(1);
}
```

```
private void TextBox1_TextChanged(object sender, System.EventArgs e)
{
    Object obj = this.Session["ClickedObject"];

    if (obj!=null)
        if (obj.GetType().ToString()=="NETRONIC.XGantt.Web.VcNode")
        {
            ((VcNode)obj).set_DataField(1, TextBox1.Text);
            ((VcNode)obj).Update();
        }
}
```

◀ back

# Object Definition (Excerpt of index.html)

```
<object id="XDependentDummy" width=0 height=0  
standby="Please wait while loading the diagram prerequisites..."  
classid="CLSID:544C9013-D784-472f-8EA6-BDF86ECF0427"  
codebase="xdependent.cab#version=7,1,0,0" >
```

Diagram prerequisites didn't load!

```
</object >
```

```
<object id="MultiLineTable1" width=100% height=70%  
standby="Please wait while loading the diagram..."  
classid="WebClientSideGraphics.dll  
#WebClientSideGraphicsApplication.WebClientSideGraphics"  
style="font:normal 8pt Arial"  
>
```

```
<param Name="ServerURL"  
Value="localhost/csg/server/asp/server.asp" />
```

```
<param Name="UpdateInterval" Value="15000" />
```

User control didn't load!

```
</object >
```

# Configuration.xml

```
<configuration>  
  <system.windows.forms jitDebugging="true" />  
  <runtime>  
    <assemblyBinding xmlns="urn:schemas-microsoft-com:asm.v1">  
      <probing privatePath="" />  
    </assemblyBinding>  
  </runtime>  
</configuration>
```