



XCONNECT DYNAMIC WEB REPORTING

OBJECTIVE

1. Create dynamic web pages that display data acquired by XConnect.
2. Accept user inputs include date time range, station and sensor
3. Customizable data format in tabular

SOFTWARE REQUIREMENT

1. Windows 2000 Server with Internet Information Server (IIS)
2. XConnect with Database Option – Purchased separately by Customer
3. For Access MDB, no additional license required. For Oracle or SQL-Server, database is supplied by customer.
 - Windows 2000 Server and IIS will be supplied, prepared and configured by the customer. Windows 2000 Server must have Service Pack 4 or later. It can be a standalone server or part of the domain. TCP/IP protocol must be installed and configured. IIS must have FrontPage 2000 Server Extension (Installed by default). IIS is configured with application isolation level to high. A virtual directory must be created and point to the actual web application directory.
 - Other runtime requirement will be installed by XConnect setup.

GENERAL DESCRIPTIONS ON IMPLEMENTATION

The dynamic web pages use server-side Active Server Page (ASP) to accept the user input within browsers, retrieve the data from database, format it into Extensible Markup Language (XML) and use Extensible Stylesheet Language Transformations (XSLT) to format the data into viewable web pages.

The ASP pages display forms which user can select inputs, such as station name, sensor name, time range and submit buttons. When the user click the submit button within the browsers, the request is sent to server. ASP pages interpret the request and generate proper SQL strings to retrieve data from database. The data is returned in an ADO result set. Then the same ASP creates the XML object and stores the data into it. It then returns the data with pre-defined XSLT pages as the response back to user. The browser has the XML and translated by XSLT to render the page into correct style, look and feel.

There are two key components in this implement. The first is the data, which is in XML format. The other is the format, which is pre-defined in XSLT style sheets. All data returned to the clients are in XML format.



ASP and XSLT programs are provided in the form of source code, so it can be the start point of further customization.

REPORTS TO BE PROVIDED

1. Station List/Sensor List
2. Last Reported Time for Stations
3. Data for Selected Station
4. Data for Today/Yesterday/5 days
5. Data for Selected Station, Sensor and Time Range

REPORT SAMPLES

Sample 1: System Data

Station ID	Sensor Name	Time Tag	Source	Original Value	Edited Value
EVANS CREEK	BATTERY	9/5/2003 12:15:00AM	S	13.51	13.51
EVANS CREEK	BATTERY	9/5/2003 1:15:00AM	S	13.41	13.41
EVANS CREEK	BATTERY	9/5/2003 2:15:00AM	S	13.34	13.34
EVANS CREEK	BATTERY	9/5/2003 3:15:00AM	S	13.30	13.30
EVANS CREEK	BATTERY	9/5/2003 4:15:00AM	S	13.26	13.26
EVANS CREEK	BATTERY	9/5/2003 5:15:00AM	S	13.23	13.23
EVANS CREEK	BATTERY	9/5/2003 6:15:00AM	S	13.20	13.20
EVANS CREEK	BATTERY	9/5/2003 7:15:00AM	S	13.18	13.18
EVANS CREEK	BATTERY	9/5/2003 8:15:00AM	S	13.16	13.16
EVANS CREEK	BATTERY	9/5/2003 9:15:00AM	S	13.14	13.14
EVANS CREEK	BATTERY	9/5/2003 10:15:00AM	S	13.12	13.12
EVANS CREEK	BATTERY	9/5/2003 11:15:00AM	S	13.12	13.12
EVANS CREEK	BATTERY	9/5/2003 12:15:00PM	S	13.10	13.10
EVANS CREEK	BATTERY	9/5/2003 1:15:00PM	S	13.21	13.21
EVANS CREEK	BATTERY	9/5/2003 2:15:00PM	S	13.95	13.95
EVANS CREEK	BATTERY	9/5/2003 3:15:00PM	S	13.90	13.90
EVANS CREEK	BATTERY	9/5/2003 4:15:00PM	S	13.88	13.88
EVANS CREEK	BATTERY	9/5/2003 5:15:00PM	S	13.84	13.84
EVANS CREEK	PRECIPITATIO	9/5/2003 12:00:00AM	S	271.20	271.20
EVANS CREEK	PRECIPITATIO	9/5/2003 12:15:00AM	S	271.40	271.40
EVANS CREEK	PRECIPITATIO	9/5/2003 12:30:00AM	S	271.40	271.40
EVANS CREEK	PRECIPITATIO	9/5/2003 12:45:00AM	S	271.40	271.40
EVANS CREEK	PRECIPITATIO	9/5/2003 1:00:00AM	S	271.40	271.40
EVANS CREEK	PRECIPITATIO	9/5/2003 1:15:00AM	S	271.40	271.40
EVANS CREEK	PRECIPITATIO	9/5/2003 1:30:00AM	S	271.40	271.40
EVANS CREEK	PRECIPITATIO	9/5/2003 1:45:00AM	S	271.40	271.40
EVANS CREEK	PRECIPITATIO	9/5/2003 2:00:00AM	S	271.40	271.40
EVANS CREEK	PRECIPITATIO	9/5/2003 2:15:00AM	S	271.40	271.40

Sample 2: Stations not reported



XC Reports - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites Media

Address C:\Projects\XCReports\Reports\html\005 Stations Not Reporting Today.html Go Links

Stations Not Reporting Since 9/5/2003

9/5/2003 2:51:58PM

Station ID	Satellite ID	Unit ID	Basin	State
AMISTAD DAM				
ARROYO COLORADO A	0092E620	ARROYO COLORADO		
MIDDLE FORK SAN PE	0091A224	MIDDLE FORK SAN		
NORTH FORK SAN PE	009197BE	NORTH FORK SAN		
PINTO CREEK	009205D2	PINTO CREEK		
RIO GRANDE AT COLOM	00923048	RIO GRANDE AT C		
RIO GRANDE AT FORT Q	0090A0DE	RIO GRANDE AT F		
RIO GRANDE AT LARED	009246D8	RIO GRANDE AT L		
RIO GRANDE AT LOS E	009290B0	RIO GRANDE AT L		
RIO GRANDE AT RIO G	009283C6	RIO GRANDE AT R		
RIO GRANDE AT ROM	00927342	RIO GRANDE AT R		
RIO GRANDE BELOW F	00926034	RIO GRANDE BELO		
RIO GRANDE NEAR BR	009321C4	RIO GRANDE NEAR		
RIO GRANDE NEAR EL I	0092233E	RIO GRANDE NEAR		
RIO GRANDE NEAR SA	0093145E	RIO GRANDE NEAR		
SAN FELIPE CREEK NE	0091E12E	SAN FELIPE CREE		

Done My Computer

Sample 3: Last Reporting Times



XC Reports - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites Media Print Mail

Address C:\Projects\XCReports\Reports\html\007 Stations Last Update.html Go Links

Last Reporting Times

9/5/2003 3:05:05PM

Station ID	Satellite ID	Unit ID	Last Update
AMISTAD DAM			
ARROYO COLORADO A	0092E620	ARROYO COLORADO	
EVANS CREEK	0091B152	EVANS CREEK	9/5/2003 5:19:11PM
MIDDLE FORK SAN PE	0091A224	MIDDLE FORK SAN	
NORTH FORK SAN PE	009197BE	NORTH FORK SAN	
PINTO CREEK	009205D2	PINTO CREEK	9/4/2003 8:20:01PM
RIO GRANDE AT COLOM	00923048	RIO GRANDE AT C	
RIO GRANDE AT FORT Q	0090A0DE	RIO GRANDE AT F	
RIO GRANDE AT LARED	009246D8	RIO GRANDE AT L	9/4/2003 8:20:41PM
RIO GRANDE AT LOS E	009290B0	RIO GRANDE AT L	
RIO GRANDE AT RIO G	009283C6	RIO GRANDE AT R	
RIO GRANDE AT ROM	00927342	RIO GRANDE AT R	9/4/2003 8:21:11PM
RIO GRANDE BELOW F	00926034	RIO GRANDE BELO	
RIO GRANDE NEAR BR	009321C4	RIO GRANDE NEAR	
RIO GRANDE NEAR EL I	0092233E	RIO GRANDE NEAR	
RIO GRANDE NEAR SA	0093145E	RIO GRANDE NEAR	
ROUGH CANYON	009184C8	ROUGH CANYON	9/5/2003 5:18:41PM
SAN FELIPE CREEK NE	0091E12F	SAN FELIPE CREE	

Done My Computer

Notes on Installation and Configuration:

1. Server must have Windows 2000 Server and the latest service pack (SP4 or later).
2. IIS must at least have the default installation options.
3. Install and configure XConnect first
4. Then install XCReports Web Add-on
5. Some additional configuration may be required as described in documents shipped with setup program.