

Proposed New MTR Update Report to Allow MTR Users to Retrieve MTR data via a XML and Examples of Using MS Office 2003 to Process the Data

Settlements Support
July 2004

Agenda

- Overview
- What is XML?
- Methods of retrieving data
- Methods of processing the XML data
- How to use XML with Excel 2003
- How to use XML with Access 2003

Overview

- Scope
 - Initiated as a result of a Participant Issue Log #206 for the IMO to provide an alternative method to allow Meter Service Providers and Meter Market Participants to access their MTR data without going through the MTR Workflow program.
 - Issue was reviewed and endorsed by the MTR Working Group with MSP and MMP representation from Revenue Metering Sub-Committee (RMSC)
 - Initial focus is to provide daily MTR data as an XML document to be called “MTR Update Report”

What is XML ?

– What is **XML**?

- XML stands for e**X**tensible **M**arkup **L**anguage.
- HTML (HyperText Markup Language) is strictly a formatting language that controls the formatting of a document.
- XML is a meta-language that enables users to create markup languages that are designed to deal with specific domains.
- XML is ideal for transporting data that is typically held in databases from one place to another. The source and destination need not be compatible with each other than they both have an the ability to handle XML.
- XML has become outrageously popular and is well on its ways to universal acceptance as the file format of choice for transporting data between dissimilar computers and applications.

What is XML ?

- XML was designed to describe data and to focus on what data is.
- XML was created to structure, store and to send information.
- XML-based document can consist of an XML file alone or can be accompanied by XSL or XSD:
 - XML file - document data (Mandatory, provided by the IMO)
 - XSD file - document schema definition (Optional)
 - XSL file - document style sheet (Optional)

What is XSD and XSL?

- XSD provides *schema definition*.
- XSD schema allows programs to validate data. It also provides the framework for structuring data.
- XSL provides the document *style sheet*.
- XSL helps in displaying the information in a XML document in a user friendly style and is normally presented on an Internet Browser.

Methods of retrieving data from the IMO

- Via Outbound Report Management System (ORMS).
 - New web-based interface for market participants to retrieve automated XML generated documents from an “IMO Reports” website.
- Access to the MTR reports by:
 - Browsing (XML reports can be viewed in a browser window and downloaded interactively.)
 - Programmatic access with custom code
- References:
 - IT Standing Committee web pages:
http://www.theimo.com/imoweb/consult/it_sc.asp
 - Technical Interface web pages (Technical information on XML and Automated Documents):
<http://www.theimo.com/imoweb/ti/techinterface.asp>
 - Quick Takes:
http://www.theimo.com/imoweb/pubs/training/QT12_AccessingXMLReports.pdf
http://www.theimo.com/imoweb/pubs/training/QT15_RetrievingReports.pdf

Simulation of How XML Documents can be Retrieved from IMO Report Website

- **Browsing** 
- Programmatic Access for Archiving and Real-time Scraping

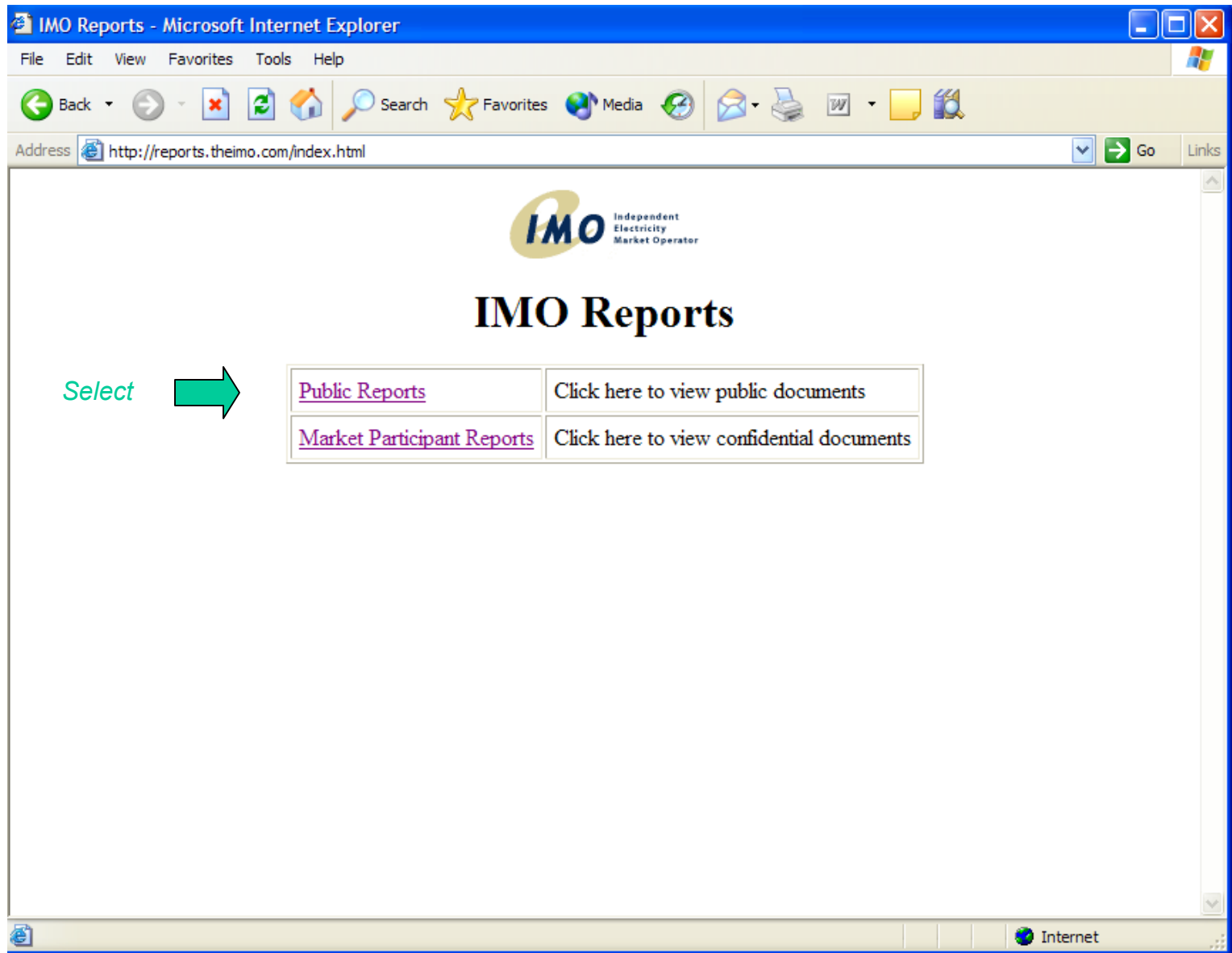
Only the interactive browser retrieval of XML documents will be presented.

Go to the IMO Reports Website

- URL:

<http://reports.theIMO.com/>

Simulation of how to retrieve both Public and
Market Participant confidential reports



Simulation of how to retrieve public reports





Index of /public - Microsoft Internet Explorer

File Edit View Favorites Tools Help

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Address <http://reports.theimo.com/public/> Go Links

IMO Independent Electricity Market Operator

<u>Name</u>	<u>Last modified</u>	<u>Size</u>	<u>Description</u>
 Parent Directory		-	
 DispUnconsHOEP/	14-Jul-2004 11:05	-	
 GenOutputCapability/	14-Jul-2004 11:01	-	
 IntertieScheduleFlow/	14-Jul-2004 11:01	-	

Internet

Select




Simulation of how to retrieve HOEP reports
















Index of /public/DispUnconsHOEP - Microsoft Internet Explorer

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Address <http://reports.theimo.com/public/DispUnconsHOEP/> Go Links



Dispatch Unconstrained Energy HOEP Price

<u>Name</u>	<u>Last modified</u>	<u>Size</u>	<u>Description</u>
 Parent Directory		-	
 PUB_DisUnconsHOEP.xml	14-Jul-2004 11:05	1.5K	
 PUB_DisUnconsHOEP_20040707.xml	08-Jul-2004 00:15	2.8K	
 PUB_DisUnconsHOEP_20040707_v15.xml	07-Jul-2004 15:05	2.0K	
 PUB_DisUnconsHOEP_20040707_v16.xml	07-Jul-2004 16:05	2.1K	
 PUB_DisUnconsHOEP_20040707_v17.xml	07-Jul-2004 17:05	2.2K	
 PUB_DisUnconsHOEP_20040707_v18.xml	07-Jul-2004 18:05	2.3K	
 PUB_DisUnconsHOEP_20040707_v19.xml	07-Jul-2004 19:05	2.4K	
 PUB_DisUnconsHOEP_20040707_v20.xml	07-Jul-2004 20:05	2.4K	
 PUB_DisUnconsHOEP_20040707_v21.xml	07-Jul-2004 21:15	2.5K	
 PUB_DisUnconsHOEP_20040707_v22.xml	07-Jul-2004 22:15	2.6K	
 PUB_DisUnconsHOEP_20040707_v23.xml	07-Jul-2004 23:15	2.7K	
 PUB_DisUnconsHOEP_20040707_v24.xml	08-Jul-2004 00:15	2.8K	
 PUB_DisUnconsHOEP_20040708.xml	09-Jul-2004 00:15	2.8K	
 PUB_DisUnconsHOEP_20040708_v1.xml	08-Jul-2004 01:05	827	

Internet

Select




Simulation of how to retrieve HOEP reports

IMO Dispatch Unconstrained Energy HOEP Price Report - Microsoft Internet Explorer

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Address http://reports.theimo.com/public/DispUnconsHOEP/PUB_DisUnconsHOEP_20040707.xml Go Links

 Independent Electricity Market Operator [Help](#)

IMO Dispatch Unconstrained Energy HOEP Price Report

For Jul 07, 2004

Generated on Jul 08, 2004 00:05:41 a.m

Hour	HOEP Price	Data Source
1	32.68	DSO_RD
2	24.21	DSO_RD
3	18.19	DSO_RD
4	22.29	DSO_RD
5	26.92	DSO_RD
6	13.57	DSO_RD
7	26.83	DSO_RD
8	36.07	DSO_RD
9	41.4	DSO_RD
10	42.24	DSO_RD
11	41.17	DSO_RD
12	40.62	DSO_RD
13	49.92	DSO_RD
14	53.16	DSO_RD
15	67.71	DSO_RD

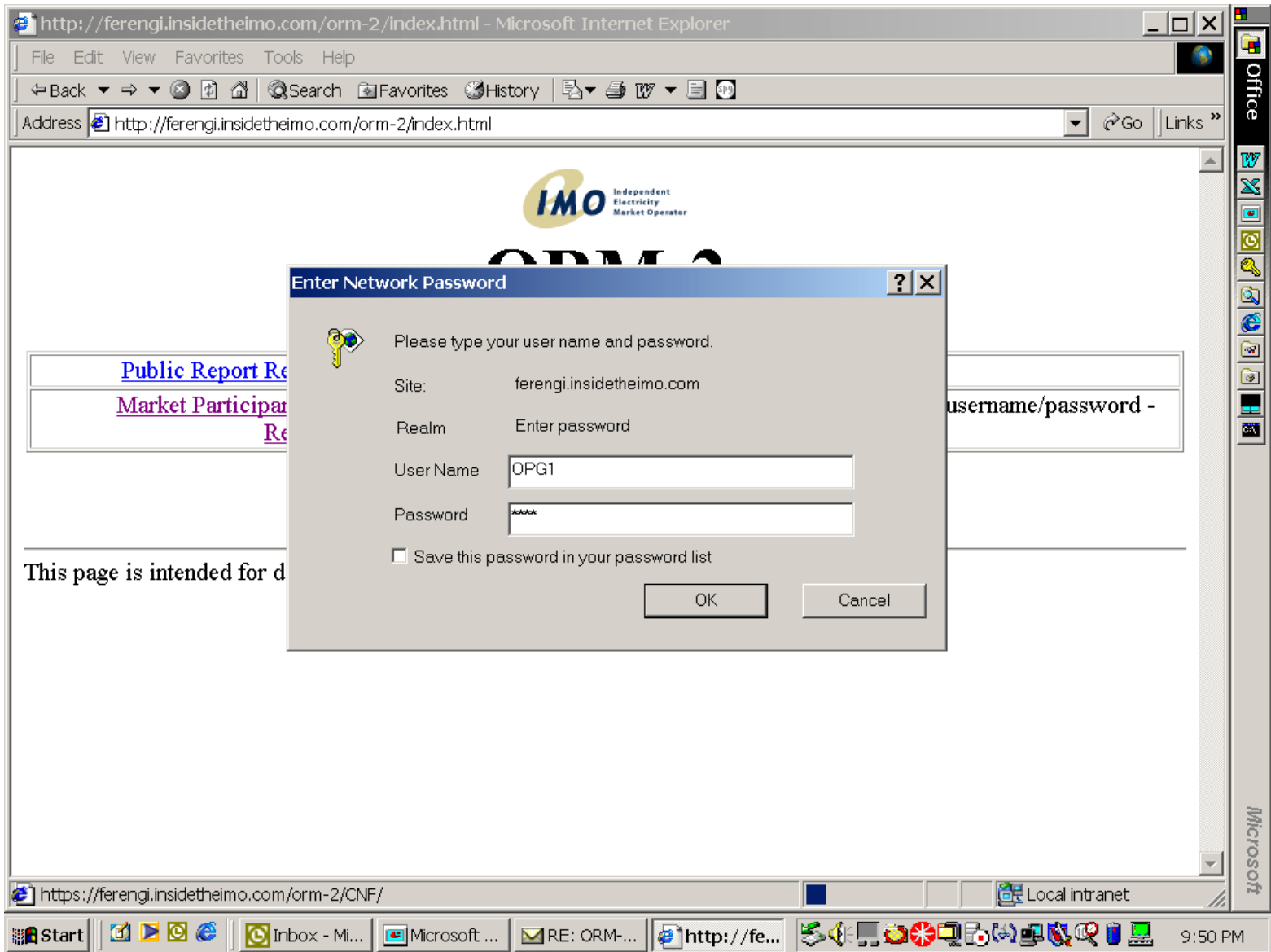
Internet

Simulation of how to retrieve HOEP reports

Select



Simulation of how to retrieve MTR Update Report



Simulation of how to retrieve MTR Update Report

Index of /orm-2/CNF/OPG - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address <https://ferengi.insidetheimo.com/orm-2/CNF/OPG/> Go Links »

Index of /orm-2/CNF/OPG

Name	Last modified	Size	Description
Parent Directory		-	
DispAdvisory/	11-Feb-2004 14:00	-	
Document1/	05-Feb-2004 15:33	-	
Document2/	05-Feb-2004 15:34	-	

This page is intended for demo purposes only.

Start | | Inbox - Mic... | Microsoft Po... | L:\ITprojects... | Index of /... | Local intranet | 2:00 PM

Select

Think MTR Update Report instead of DispAdvisory

Simulation of how to retrieve MTR Update Report

Index of /orm-2/CNF/OPG/DispAdvisory - Microsoft Internet Explorer

Address <https://ferengi.insidetheimo.com/orm-2/CNF/OPG/DispAdvisory/>

IMO Independent Electricity Market Operator


Dispatch Advisory Report listing ...

Name	Last modified	Size	Description
Parent Directory		-	
CNF-OPG_DispatchAdvisory.xml	02-Mar-2004 21:50	6.5K	Global Link
CNF-OPG_DispatchAdvisory_200402111350_v1.xml	11-Feb-2004 13:50	6.5K	
CNF-OPG_DispatchAdvisory_200402111355_v1.xml	11-Feb-2004 13:55	6.5K	
CNF-OPG_DispatchAdvisory_200402111400_v1.xml	11-Feb-2004 14:00	6.5K	
CNF-OPG_DispatchAdvisory_200402111405_v1.xml	11-Feb-2004 14:05	6.5K	
CNF-OPG_DispatchAdvisory_200402111410_v1.xml	11-Feb-2004 14:10	6.5K	
CNF-OPG_DispatchAdvisory_200402111415_v1.xml	11-Feb-2004 14:15	6.5K	
CNF-OPG_DispatchAdvisory_200402111435_v1.xml	11-Feb-2004 14:35	6.5K	
CNF-OPG_DispatchAdvisory_200402111440_v1.xml	11-Feb-2004 14:40	6.5K	
CNF-OPG_DispatchAdvisory_200402111445_v1.xml	11-Feb-2004 14:45	6.5K	
CNF-OPG_DispatchAdvisory_200402111450_v1.xml	11-Feb-2004 14:50	6.5K	
CNF-OPG_DispatchAdvisory_200402111455_v1.xml	11-Feb-2004 14:55	6.5K	

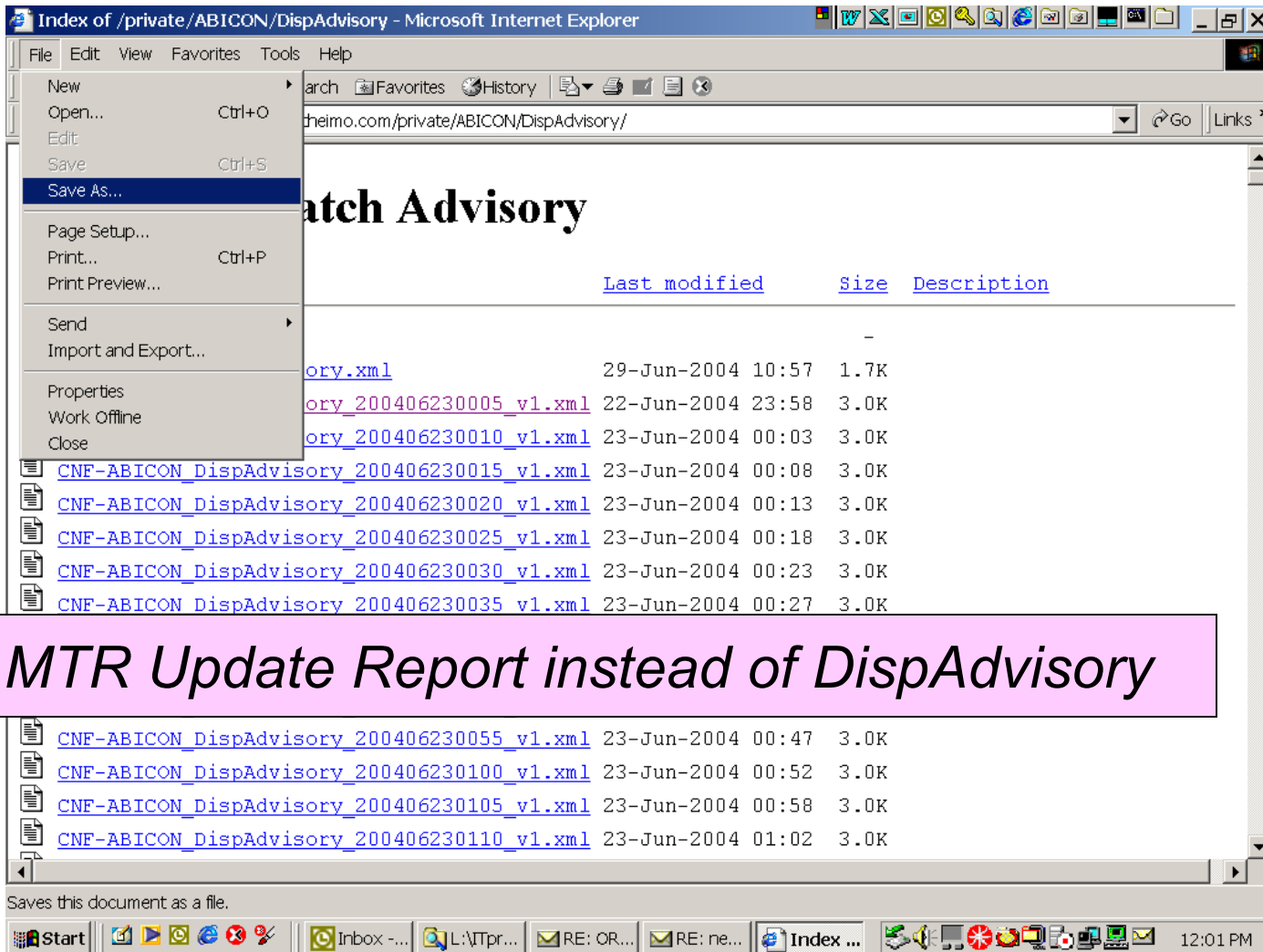
Done Local intranet

Start | Inbox - Mi... | Microsoft ... | RE: ORM-... | Index of ... | 9:54 PM

Select



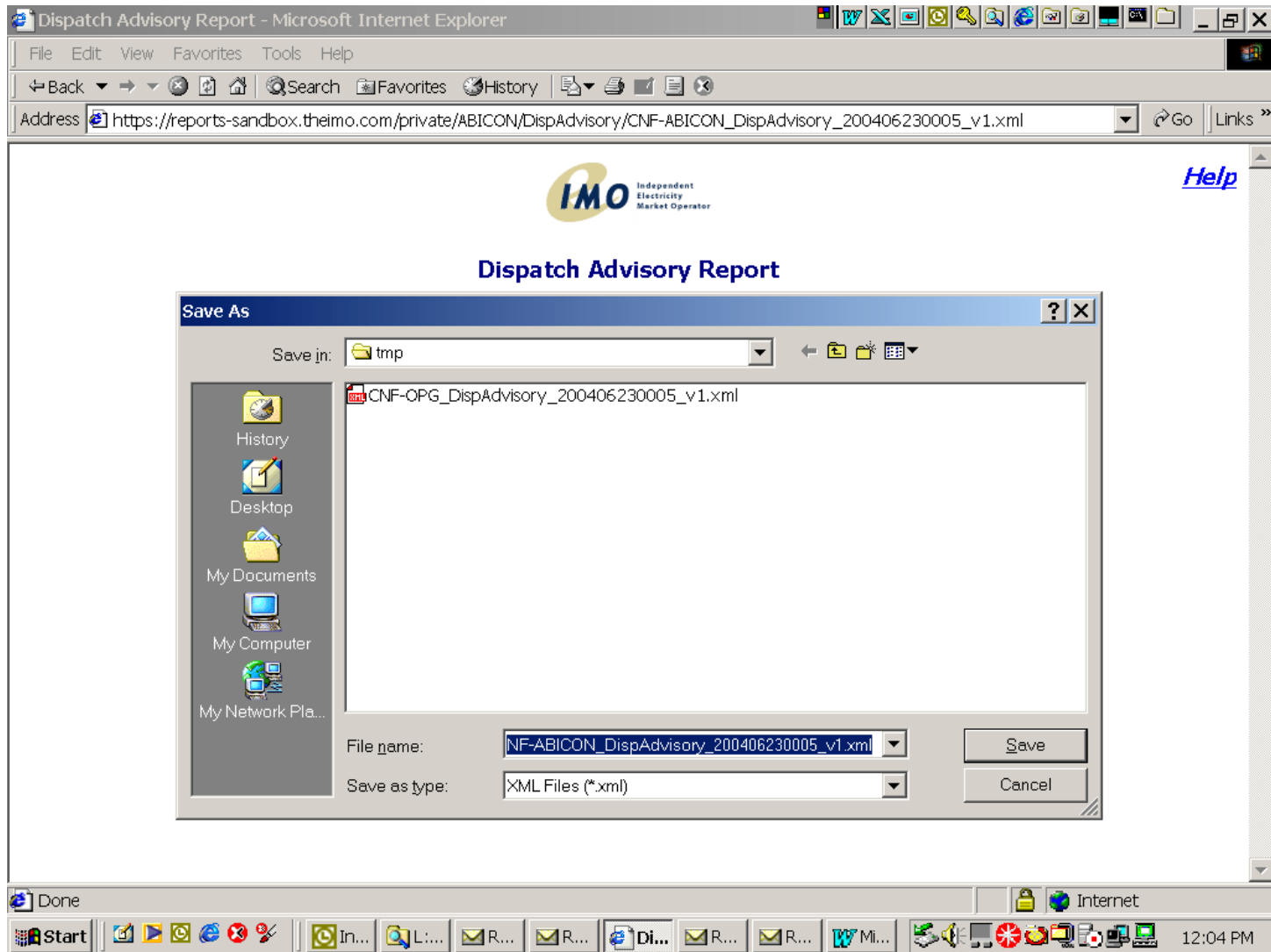
Think MTR Update Report instead of DispAdvisory



Select Save As Option from File Dropdown

Think MTR Update Report instead of DispAdvisory

Simulation of Saving MTR Update Report



Save XML document in target directory

Simulation of Saving MTR Update Report

Methods of Processing MTR Update Report Downloaded from IMO Reports Website

- Custom built program.
- MS Office 2003
 - XML works with the Microsoft Office 2003 only.
 - Both Excel 2003 and Access 2003 can import/append XML data

Preliminary Specification of the Content Description of MTR Update Report

Tag	Description	Format	Sample 1
<u>LastUpdateDate</u>	Last Update date	text	12/23/03 8:00
<u>TicketNumber</u>	Meter Trouble ticket number	text	82262
<u>MeterID</u>	Meter Identification Number	text	2244192440
Zone ID	Zone within the province where the meter resides		Bruce
<u>DefectDate</u> (Should be <u>DefectDate</u>)	Trade Date for which the MTR was defected (should be detected)	text	2003/11/25 01:47
Comments	Comments added by MSP and/or IMO	Up to 2000 characters (Use memo data type in MS Access 2003)	NORFOLK PME, 91519-426-2481, 0141083, PSI-S100 rejected RI Accepted 2003/11/25 02:45 (by: John Smith)

Preliminary Specification of Content Description of MTR Update Report (cont'd)

<u>AttachmentsFlag</u>	Yes/No for Attachment exist	text	
<u>IssueDate</u>	Date the MTR was Issued	text	2003/11/25 05:46
<u>ExpectedAckDate</u>	Date the MSP is expected to acknowledge the MTR	text	2003/11/26 15:00
<u>ActualAckDate</u>	Actual date the MSP acknowledged the MTR	text	
<u>ExpectedResDate</u>	Date when resolution by the MSP is expected.	text	2003/11/27 9:00
<u>ActualResDate</u>	Actual date the MSP resolved the MTR	text	
<u>ClosureDate</u>	Date the MTR was closed by the IMO	text	2003/11/25 07:33
<u>MTRState</u>	Reject Submission - IMO Review MSP Resolution MSP Current Accept-Resolution-closed	text	Reject Submission - IMO Review
<u>MeterMPID</u>	Meter Market Participant related to the MTR	text	105216
<u>MeterSPID</u>	Meter Service Provider to whom the MTR was assigned.	text	105,216
<u>UserName</u>	User	text	
<u>ResDetails</u>	Response to MTR	Up to 4000 characters (Use memo data type in MS Access 2003)	

Preliminary Specification of Content Description of MTR Update Report (cont'd)

<u>CreationDate</u>	Date the MTR was created	text	2003/11/25 05:21
<u>FirstName</u>	First name of creator	text	
<u>LastName</u>	Last name of creator	text	
<u>AckSubmissionFlag</u>	0 or 1	text	0
<u>MeterAdjAttachmentsFlag</u>	Yes/No for Attachment exist	text	
<u>RestorationFlag</u>	Yes/No	text	
<u>ResAttachmentsFlag</u>	Yes/No for Attachment exist	text	
<u>AttachmentsFlag2</u>	Yes/No for Attachment exist	text	
<u>CommentsbyMSPorIMO</u>	Additional Comments	Up to 2000 characters (Use memo data type in MS Access 2003)	
<u>ResSubmissionFlag</u>	0 or 1	text	0
<u>RestorationDueDate</u>	Due date for restoration	text	
<u>ActualRestorationDate</u>	Actual date of restoration	text	
<u>MeterType</u>	Meter Type; M - Main A - Alternate S - Stand alone	text	S
<u>ReportsSendFlag</u>		text	N
<u>ParticipantOrgName</u>	Participant's Organization Name	text	ACME HYDRO INC.
<u>OrgContact</u>	Organization Contact	text	Smith, Gerry

Preliminary Specification of Content Description of MTR Update Report (cont'd)

<u>ErrorCode</u>		text	24
<u>ErrorType</u>	Communication or Validation	text	COMMUNICATION
<u>ChannelNum</u>	Numbers 1 -16, All or Unk (unknown)	text	
<u>CommErrorCodeDesc</u>		text	Protocol Error
Validation Error Code Description		text	

MTR Update Report - Sample XML Document

```
Sample MTR Update Report.xml - Notepad
File Edit Format View Help
<?xml version="1.0" encoding="UTF-8" standalone="no"?>
<IMODocument NS1:noNamespaceSchemaLocation="MTR.xsd" xmlns="http://www.theIMO.com/schema"
xmlns:NS1="http://www.w3.org/2001/XMLSchema-instance"><IMODocHeader><DocTitle>IMO Trouble Meter
Report</DocTitle><DocRevision></DocRevision><DocConfidentiality><DocConfClass>CNF</DocConfClass><DocConfGroups><DocConfGr
oup>AME
HYDRO</DocConfGroup></DocConfGroups></DocConfidentiality><CreatedAt>2003-12-28T01:46:24</CreatedAt></IMODocHeader><IMODoc
Body><TroubleTicket><LastUpdateDate>2004/03/10
14:22</LastUpdateDate><TicketNumber>74770</TicketNumber><MeterID>224092680</MeterID><ZoneID>SSSS</ZoneID><DefectDate>2004
/01/11 00:45</DefectDate><Comments>SMITH S, 0141292,
PSI-S200</Comments><AttachmentsFlag>Yes</AttachmentsFlag><IssueDate>2004/01/13
14:17</IssueDate><ExpectedAckDate>2004/01/14 15:00</ExpectedAckDate><ActualAckDate>2004/01/14
15:02</ActualAckDate><ExpectedResDate>2004/01/15 9:00</ExpectedResDate><ActualResDate>2004/03/10
14:22</ActualResDate><ClosureDate>2004/03/10 14:22</ClosureDate><MTRState>Accept Resolution -
Closed</MTRState><MeterMPID>102004</MeterMPID><MeterSPID>106666</MeterSPID><UserName>abcdef</UserName><ResDetails>Mar.12/
04: Please find data attached for Feb.27 @ 08:31 to Mar.3 @ 07:30. (P0012228.402) (by: MSP INC. (MSP): Date: Friday, Mar
12 2004 08:58:40 AM) Used the data file for Feb.27 @ 08:31 to Mar.3 @ 07:30. Please confirm the loading from 02/27 @
00:01 to end of file. Please send more data. (by: IMO:Agent 1: Date: Friday, Mar 12 2004 01:33:06 PM)
*****EITRP Implemented FEB 3/04 - due date April
26/04*****
IMO - Please note: work to be
completed before or on April 26/04. (by: IMO:Agent 2: Date: Monday, Apr 19 2004 09:09:15 AM) MP (EI) Apr.21/04: Attached
file covers the period from Apr.2 @ 08:30 to Apr.8 @ 11:00 (P0012249.404). The estimate is prepared based on e-mail
direction from IMO's rep. outlining how settlement data is to be calculated from ERA/DRA data. (by: MSP INC. (MSP): Date:
Wednesday, Apr 21 2004 01:25:12 PM) IMO (DL) APR 22.04 - Data file P0012449.404 accepted for time period of Apr 2.04 @
08:31 to Apr 8.04 @ 11:00 - returned to MSP for data from Apr 8.04 @ 11:01 to date. (by: IMO:Agent2 Date: Thursday, Apr
22 2004 10:40:06 AM) MP (EI) Apr.30/04: Unfortunately all three phases of ERA data were erased while downloading to the
computer by field technician for the period from 04/08/2004 11:01 am - 04/16/2004 11:15. For this time frame the IMO is
to use data from last year 04/17/2003 11:01-04/25/2003 11:15. Also, please find data attached for Apr.16 @ 11:16-Apr.23 @
11:00 (P0012252.404). (by: MSP: Date: Friday, Apr 30 2004 10:36:32 AM) Edit performed as instructed IMO used data from
last year 04/17/2003 11:01-04/25/2003 11:15 for 04/08/2004 11:01 am - 04/16/2004 11:15. Data file provided accepted from
2004/04/16 11:16 - 2004/04/23 11:00. (by: IMO:Agent1: Date: Monday, May 3 2004 02:07:08
PM)</ResDetails><CreationDate>2004/01/13
14:05</CreationDate><FirstName>SYSTEM</FirstName><LastName>SYSTEM</LastName><AckSubmissionFlag>0</AckSubmissionFlag><Mete
rAdjAttachmentsFlag>Yes</MeterAdjAttachmentsFlag><RestorationFlag>Y</RestorationFlag><ResAttachmentsFlag>N</ResAttachment
sFlag><AttachmentsFlag2>N</AttachmentsFlag2><CommentsbyMSPorIMO></CommentsbyMSPorIMO><ResSubmissionFlag>0</ResSubmissionF
lag><RestorationDueDate>2004/03/09
12:22</RestorationDueDate><ActualRestorationDate></ActualRestorationDate><MeterType>S</MeterType><ReportsSendFlag>N</Repo
rtsSendFlag><ParticipantOrgName> HYDRO
INC. </ParticipantOrgName><OrgContact>Smith, Joe</OrgContact><ErrorCode>G05</ErrorCode><ErrorType>VALIDATION</ErrorType><Ch
annelNum>UNK</ChannelNum><CommErrorCodeDesc></CommErrorCodeDesc><ValidErrorCodeDesc>Power Outage Interval
Tolerance</ValidErrorCodeDesc></TroubleTicket><TroubleTicket><LastUpdateDate>2004/03/10
14:22</LastUpdateDate><TicketNumber>74770</TicketNumber><MeterID>0244000000</MeterID><ZoneID>123</ZoneID><DefectDate>200
4/01/11 00:45</DefectDate><Comments>WELLIS MS, 0140000,
```

MTR Update Report - Sample XSD that can be used with Access 2003

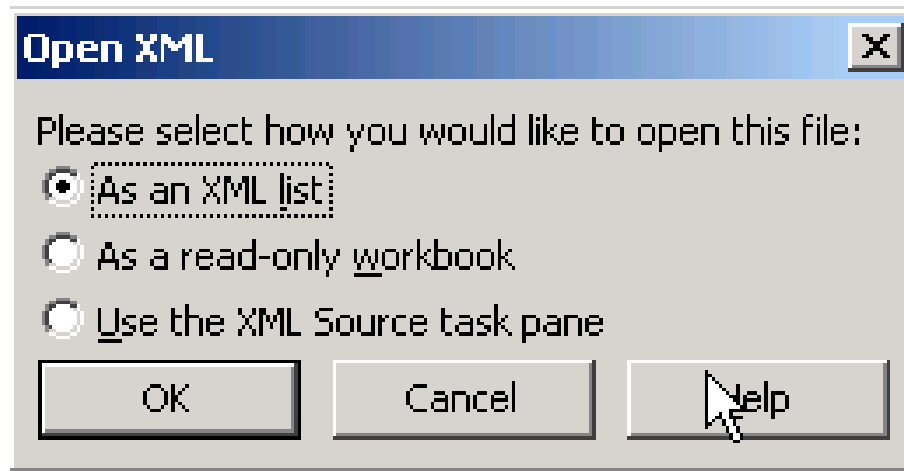
```
<?xml version="1.0" encoding="UTF-8"?>
<xs:schema targetNamespace="http://www.theIMO.com/schema" xmlns:xs="http://www.w3.org/2001/XMLSchema" xmlns:imo="http://www.imo.com/schema">
  <!-- Following stuff is report specific -->
  <xs:include schemaLocation="IMODocument_r1.xsd"/>
  <xs:element name="IMODocBody">
    <xs:annotation>
      <xs:documentation>IMO Automated Document Body</xs:documentation>
    </xs:annotation>
    <xs:complexType name="TroubleReportRecord">
      <xs:sequence maxOccurs="unbounded">
        <xs:element name="TroubleTicket">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="LastUpdateDate" type="xs:string">
                <xs:annotation>
                  <xs:documentation>Last Update Date</xs:documentation>
                </xs:annotation>
              </xs:element>
              <xs:element name="TicketNumber" type="xs:string">
                <xs:annotation>
                  <xs:documentation>Meter Trouble Ticket Number</xs:documentation>
                </xs:annotation>
              </xs:element>
              <xs:element name="MeterID" type="xs:string">
                <xs:annotation>
                  <xs:documentation>Meter ID</xs:documentation>
                </xs:annotation>
              </xs:element>
              <xs:element name="ZoneID" type="xs:string">
                <xs:annotation>
                  <xs:documentation>Zone ID Number</xs:documentation>
                </xs:annotation>
              </xs:element>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
  </xs:element>

```

Note: when used with Access 2003 the “Comments” field must be defined as a memo field and not as a text field to accept up to 4000 characters.

How to use XML in Excel 2003

- Open the MTR XML report in Excel 2003



- Click on the first button to open the report as an XML list.

How to use XML in Excel 2003

- The user can create user-defined titles for the report

ns1>LastUpdateDate	ns1:TicketNumbe	ns1:MeterID	ns1:ZoneID	ns1:DefectDa	ns1:Comments	ns1:AttachmentsFI	ns1:IssueDate	ns1:ExpectedAckDz	ns1:ActualAc
2004/03/10 14:22	74770	224092680	SSSS	2004/01/11 00:45	SMITH S, 0141292, PSI- S200	Yes	2004/01/13 14:17	2004/01/14 15:00	2004/01/14 15

How to use XML in Excel 2003

ns1:ExpectedRes	ns1:ActualResDa	ns1:ClosureDate	ns1:MTRState	ns1:MeterMPID	ns1:MeterSPID	ns1:UserName	ns1:ResDetails
2004/01/15 9:00	2004/03/10 14:22	2004/03/10 14:22	Accept Resolution - Closed	102004	106666	abcdef	<p>Mar.12/04: Please find data attached for Feb.27 @ 08:31 to Mar.3 @ 07:30. (P0012228.402) (by: MSP INC. (MSP): Date: Friday, Mar 12 2004 08:58:40 AM) Used the data file for Feb.27 @ 08:31 to Mar.3 @ 07:30. Please confirm the loading from 02/27 @ 00:01 to end of file. Please send more data. (by: IMO:Agent 1: Date: Friday, Mar 12 2004 01:33:06 PM) *****EITRP Implemented FEB 3/04 - due date April 26/04*****</p> <p>***** IMO - Please note: Work to be completed before or on April 26/04. (by: IMO:Agent 2: Date: Monday, Apr 19 2004 09:09:15 AM) MP (EI) Apr.21/04: Attached file covers the period from Apr.2 @ 08:30 to Apr.8 @ 11:00 (P0012249.404). The estimate is prepared based on e-mail direction from IMO's rep. outlining how settlement data is to be calculated from ERA/DRA data. (by: MSP INC. (MSP): Date: Wednesday, Apr 21 2004 01:25:12 PM) IMO (DL) APR 22.04 - Data file P0012449.404 accepted for time period of Apr 2.04 @ 08:31 to Apr 8.04 @ 11:00 - returned to MSP for data from Apr 8.04 @ 11:01 to date. (by: IMO:</p>

How to use XML in Excel 2003

ns1:CreationDate	ns1:FirstName	ns1:LastName	ns1:AckSubmissionFl	ns1:MeterAdjAttachmentsFl	ns1:RestorationFl	ns1:ResAttachmentsFl	ns1:AttachmentsFl
2004/01/13 14:05	SYSTEM	SYSTEM	0	Yes	Y	N	N

How to use XML in Excel 2003

ns1:CommentsbyMSPorIMO	ns1:ResSubmissionFlag	ns1:RestorationDueDate	ns1:ActualRestorationDate	ns1:MeterType	ns1:ReportsSendFlag
		0 2004/03/09 12:22		S	N

How to use XML in Excel 2003

ns1:ParticipantOrgName	ns1:OrgContact	ns1:ErrorCode	ns1:ErrorType	ns1:ChannelNum	ns1:CommErrorCodeDesc	ns1:ValidErrorCodeDesc
HYDRO INC.	Smith,Joe	G05	VALIDATION	UNK		Power Outage Interval Tolerance

How to use XML in Excel 2003

- There is an option to append new information data in the existing Excel report.

The screenshot shows the Microsoft Excel 2003 interface. The 'Data' menu is open, and the 'XML' option is highlighted. A sub-menu is visible, listing options: Import..., Export..., Refresh XML Data, XML Source..., XML Map Properties..., Edit Query..., and XML Expansion Packs... The spreadsheet contains XML data with the following visible content:

ns1>LastUpdateDate	ns1:TicketNumber	ns1:Comments	ns1:Attachments	ns1:IssueDate	ns1:ExpectedAckDate	ns1:ActualAckDate
2004/03/10 14:22	74770			2004/01/13 14:17	2004/01/14 15:00	2004/01/14 15:00

How to use XML in Excel 2003

- The option is in the XML Map Properties:

The screenshot shows the Microsoft Excel 2003 interface with a data table and an open dialog box. The data table has the following content:

ns1:LastUpdateDate	ns1:TicketNumbe	ns1:MeterID	ns1:ZoneID	ns1:DefectDa	ns1:Comments	ns1:AttachmentsFl	ns1:IssueDate	ns1:ExpectedAckDz	ns1:ActualAc
2004/03/10 14:22	74770	224092680	SS				2004/01/13 14:17	2004/01/14 15:00	2004/01/14 15

The XML Map Properties dialog box is open, showing the following settings:

- Name: IMODocument_Map
- XML schema validation: Validate data against schema for import and export
- Data source: Save data source definition in workbook
- Data formatting and layout: Adjust column width, Preserve column filter, Preserve number formatting
- When refreshing or importing data: Overwrite existing data with new data, Append new data to existing XML lists

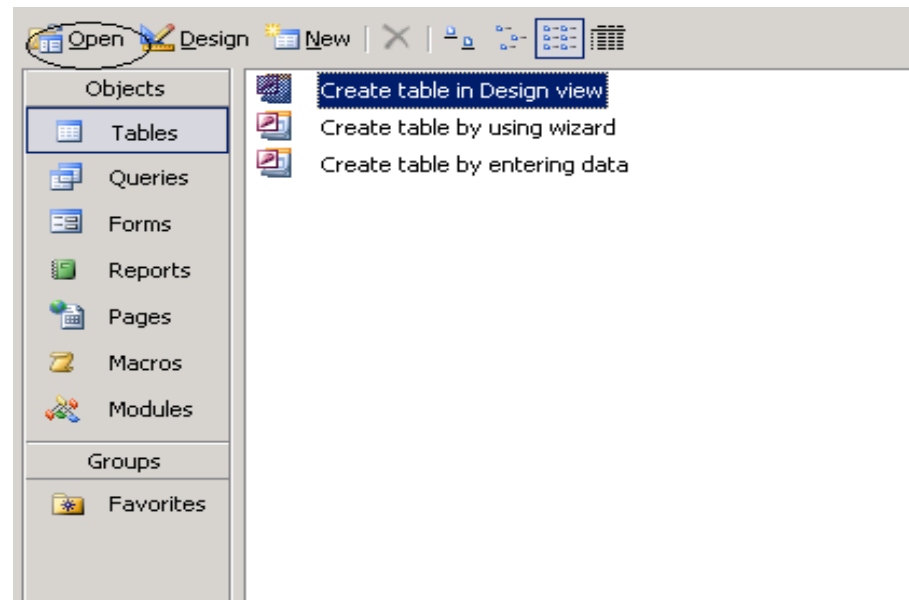
How to use XML in Excel 2003

- The data will be appended to the original information:

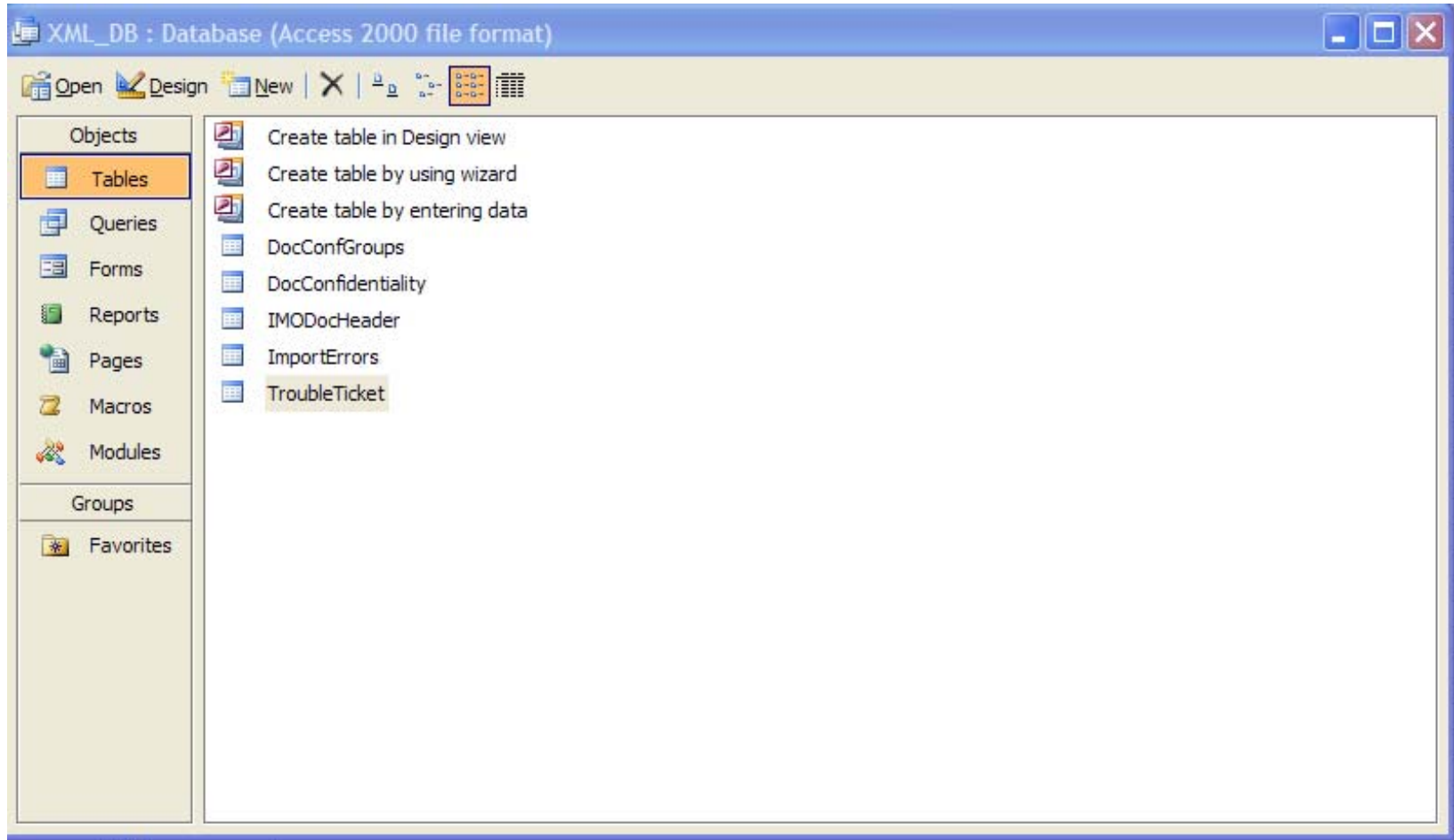
ns1:LastUpdateDate	ns1:TicketNumbe	ns1:MeterID	ns1:ZoneID	ns1:DefectDa	ns1:Comments	ns1:AttachmentsFI	ns1:IssueDate	ns1:ExpectedAckDa	ns1:ActualA
2004/03/10 14:22	74770	224092680	SSSS	2004/01/11 00:45	SMITH S, 0141292, PSI- S200	Yes	2004/01/13 14:17	2004/01/14 15:00	2004/01/14 1
2004/03/10 14:22	74770	02440000000	123	2004/01/11 00:45	WELLIS MS, 0140000, PSI- S200	Yes	2004/01/13 14:17	2004/01/14 15:00	2004/01/14 1

How to use XML in Access 2003

- In an Access 2003 database, import the MTR Update report using Access' XML data import options.



Tables after Initial Import



Modified Design of “TroubleTicket” Table

Microsoft Access

File Edit View Insert Tools Window Help

Type a question for help

TroubleTicket : Table

Field Name	Data Type	Description
LastUpdateDate	Text	
TicketNumber	Text	
MeterID	Text	
ZoneID	Text	
DefectDate	Text	
Comments	Memo	
AttachmentsFlag	Text	
IssueDate	Text	
ExpectedAckDate	Text	
ActualAckDate	Text	
ExpectedResDate	Text	
ActualResDate	Text	
ClosureDate	Text	
MTRState	Text	
MeterMPID	Text	
MeterSPID	Text	
UserName	Text	
ResDetails	Memo	
CreationDate	Text	
FirstName	Text	
LastName	Text	
AckSubmissionFlag	Text	
MeterAdjAttachmentsFlag	Text	
RestorationFlag	Text	
ResAttachmentsFlag	Text	
AttachmentsFlag2	Text	
CommentsbyMSPorIMO	Memo	
ResSubmissionFlag	Text	
RestorationDueDate	Text	
ActualRestorationDate	Text	
MeterType	Text	
ReportsSendFlag	Text	
ParticipantOrgName	Text	
OrgContact	Text	
ErrorCode	Text	
ErrorType	Text	
ChannelNum	Text	
CommErrorCodeDesc	Memo	
ValidErrorCodeDesc	Memo	

Field Properties

Design view. F6 = Switch panes. F1 = Help.

How to use XML in Access 2003

- The table will show the desired information.
Here is an example, using the original names:

LastUpdateDate	TicketNumber	MeterID	ZoneID	DefectDate	Comments	AttachmentsFlag	IssueDate	ExpectedAckDate	ActualAckDate	ExpectedRes
2004/03/10 14:22	74770	0224092680	SSSS	2004/01/11 00:45	SMITH S, 0141292, PSI-S200	Yes	2004/01/1 3 14:17	2004/01/14 15:00	2004/01/14 15:02	2004/01/15 9

How to use XML in Access 2003

ikDate	ExpectedResDate	ActualResDate	ClosureDate	MTRState	MeterMPID	MeterSPID	UserName	ResDetails
14	2004/01/15 9:00	2004/03/10 14:22	2004/03/10 14:22	Accept Resolutio n - Closed	102004	106666	abcdef	<p>Mar.12/04: Please find data attached for Feb.27 @ 08:31 to Mar.3 @ 07:30. (P001228.402) (by: MSP INC. (MSP): Date: Friday, Mar 12 2004 08:58:40 AM) Used the data file for Feb.27 @ 08:31 to Mar.3 @ 07:30. Please confirm the loading from 02/27 @ 00:01 to end of file. Please send more data. (by: IMO:Agent 1: Date: Friday, Mar 12 2004 01:33:06 PM)</p> <p>*****EITRP Implemented FEB 3/04 - due date April 26/04*****</p> <p>***** IMO - Please note: Work to be completed before or on April 26/04. (by: IMO:Agent 2: Date: Monday, Apr 19 2004 09:09:15 AM) MP (EI) Apr.21/04: Attached file covers the period from Apr.2 @ 08:30 to Apr.8 @ 11:00 (P0012249.404). The estimate is prepared based on e-mail direction from IMO's rep. outlining how settlement data is to be calculated from ERA/DRA data. (by: MSP INC. (MSP): Date: Wednesday, Apr 21 2004 01:25:12 PM) IMO (DL) APR 22.04 - Data file P0012449.404 accepted for time period of Apr 2.04 @ 08:31 to Apr 8.04 @ 11:00 - returned to MSP for data from Apr 8.04 @ 11:01 to date. (by: IMO:Agent2 Date: Thursday, Apr 22 2004 10:40:06 AM) MP (EI) Apr.30/04: Unfortunately all three phases of ERA data were erased while downloading to the computer by field technician for the period from 04/08/2004 11:01 am - 04/16/2004 11:15. For this time frame the IMO is to use data from last year 04/17/2003 11:01-04/25/2003 11:15. Also, please find data attached for Apr.16 @ 11:16-Apr.23 @ 11:00 (P0012252.404). (by: MSP: Date: Friday, Apr 30 2004 10:36:32 AM) Edit performed as instructed IMO used data from last year 04/17/2003 11:01-04/25/2003 11:15 for 04/08/2004 11:01 am - 04/16/2004 11:15. Data file provided accepted from 2004/04/16 11:16 - 2004/04/23 11:00. (by: IMO:Agent1: Date: Monday, May 3 2004</p>

How to use XML in Access 2003

CreationDate	FirstName	LastName	AckSubmissionFlag	MeterAdjAttachmentsFlag	RestorationFlag	ResAttachmentsFl	AttachmentsFlag	CommentsbyMSL
2004/01/13 14:05	SYSTEM	SYSTEM	0	Yes	Y	N	N	

How to use XML in Access 2003

RestorationDueDate	ActualRestorationDa	MeterType	ReportsSend	ParticipantOrg	OrgContact	ErrorCode	ErrorType	ChannelNun	CommErrorCode	ValidErrorC
2004/03/09 12:22		S	N	HYDRO INC.	Smith,Joe	G05	VALIDATI ON	UNK		Power Outa Interval Tole

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Limitations

- The XML works with Internet Explorer 5.5 or higher
- The XML works best with the Microsoft 2003 Office.
- Excel 2003 has a known deficiency of showing only up to 1024 characters in a cell. However Access 2003 does not have this limitation.
- At this time Access 2003 appears to be more XML compatible.

Expected Delivery by the IMO

- First week of October 2004 as part of Release R12.0x
- All qualified MTR workflow users will be provided user accounts and passwords to access to market participant confidential portion of the MTR Update Report on the IMO Report website. Special passwords may need to be supplied to ensure secure and confidential access.
- Current plan is to create MTR Update Reports each day and make then available for 7 days only. It will be up to user to archive any reports beyond the 7 days.