



eDART XML Users Group Meeting

01/19/2012

- **January Release (01/19)**
 - Transmission Outage Ticket NERC TADS Reporting functionality
 - TERM Ticket Download change
- **February Release (02/15)**
 - Transmission Outage Ticket – Submit On Time changes
- **March Release**
 - Transmission Outage Ticket – New Potentially Incomplete flag
- **May Release**
 - Transmission Outage Ticket –Conflicting Outage functionality

January 2012 eDART Release Transmission Outage Tickets Enhancements

- Auto Reclose functionality enhancements for NERC TADS 4.1, 4.2 and 4.3 reports
- XML Only Submissions
- TERM Ticket Downloads

- Additional fields included in the NERC TADS reports downloads for auto-reclose outages.
 - Report 4.1: AC Circuit Automatic Outages (200 kV+)
 - Report 4.2: DC Circuit Automatic Outages (200 kV+)
 - Report 4.3: Transformer Automatic Outages (high side, 200 kV+)
- The downloaded reports can be saved in XML format and posted on the NERC TADS website.

Report 4.1

```
<?xml version="1.0" encoding="UTF-8" standalone="yes" ?>
- <ACOutageList>
  - <ACOutage>
    <OutageIDCode>212513</OutageIDCode>
    <EventIDCode>212513</EventIDCode>
    <VoltageClassCodeName>300-399 kV</VoltageClassCodeName>
    <SubstationTerminalName1>XTO</SubstationTerminalName1>
    <SubstationTerminalName2>NA</SubstationTerminalName2>
    <SubstationTerminalName3>NA</SubstationTerminalName3>
    <ElementIdentifierName>98TO</ElementIdentifierName>
    <OHUGName>OH</OHUGName>
    <SharedCommonStructureFlag>1</SharedCommonStructureFlag>
    <FaultTypeName>Unknown fault type</FaultTypeName>
    <OutageInitiationCodeName>Element-Initiated</OutageInitiationCodeName>
    <OutageStartDT>03/03/2011 11:13</OutageStartDT>
    <OutageDurationNbr>0:07</OutageDurationNbr>
    <InitiationCauseCodeName>Failed AC Substation Equipment</InitiationCauseCodeName>
    <SustainedCauseCodeName>Failed AC Substation Equipment</SustainedCauseCodeName>
    <OutageModeCodeName>Single Mode</OutageModeCodeName>
    <ContinueOutageFlag>0</ContinueOutageFlag>
  </ACOutage>
</ACOutageList>
```

Report 4.3

```
<?xml version="1.0" encoding="UTF-8" standalone="yes" ?>
- <TransformerOutageList xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  - <TransformerOutage>
    <OutageIDCode>212509</OutageIDCode>
    <EventIDCode>212509</EventIDCode>
    <VoltageClassCodeName>400-599 kV</VoltageClassCodeName>
    <SubstationTerminalName1>STONES</SubstationTerminalName1>
    <NoElement_1 xsi:nil="true" />
    <NoElement_2 xsi:nil="true" />
    <ElementIdentifierName>13 TX-S</ElementIdentifierName>
    <NoElement_3 xsi:nil="true" />
    <NoElement_4 xsi:nil="true" />
    <FaultTypeName>P-P-G, 3P or 3P-G fault</FaultTypeName>
    <OutageInitiationCodeName>Element-Initiated</OutageInitiationCodeName>
    <OutageStartDT>01/01/2011 15:00</OutageStartDT>
    <OutageDurationNbr>0:08</OutageDurationNbr>
    <InitiationCauseCodeName>Failed Protection System Equipment</InitiationCauseCodeName>
    <SustainedCauseCodeName>Human Error</SustainedCauseCodeName>
    <OutageModeCodeName>Failed Protection System Equipment</OutageModeCodeName>
    <ContinueOutageFlag>0</ContinueOutageFlag>
  </TransformerOutage>
</TransformerOutageList>
```

Report 4.2

```
<?xml version="1.0" encoding="UTF-8" standalone="yes" ?>
- <DCOutageList xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  - <DCOutage>
    <OutageIDCode>212510</OutageIDCode>
    <EventIDCode>212510</EventIDCode>
    <VoltageClassCodeName>500-599 kV</VoltageClassCodeName>
    <SubstationTerminalName1>STONES</SubstationTerminalName1>
    <SubstationTerminalName2>NA</SubstationTerminalName2>
    <SubstationTerminalName3>NA</SubstationTerminalName3>
    <ElementIdentifierName>STES</ElementIdentifierName>
    <OHUGName>OH</OHUGName>
    <NoElement_1 xsi:nil="true" />
    <FaultTypeName>P-P Fault</FaultTypeName>
    <OutageInitiationCodeName>Element-Initiated</OutageInitiationCodeName>
    <OutageStartDT>02/02/2011 22:22</OutageStartDT>
    <OutageDurationNbr>0:08</OutageDurationNbr>
    <InitiationCauseCodeName>Failed DC Circuit Equipment</InitiationCauseCodeName>
    <SustainedCauseCodeName>Failed DC Circuit Equipment</SustainedCauseCodeName>
    <OutageModeCodeName>Common Mode Initiating</OutageModeCodeName>
    <ContinueOutageFlag>0</ContinueOutageFlag>
  </DCOutage>
</DCOutageList>
```

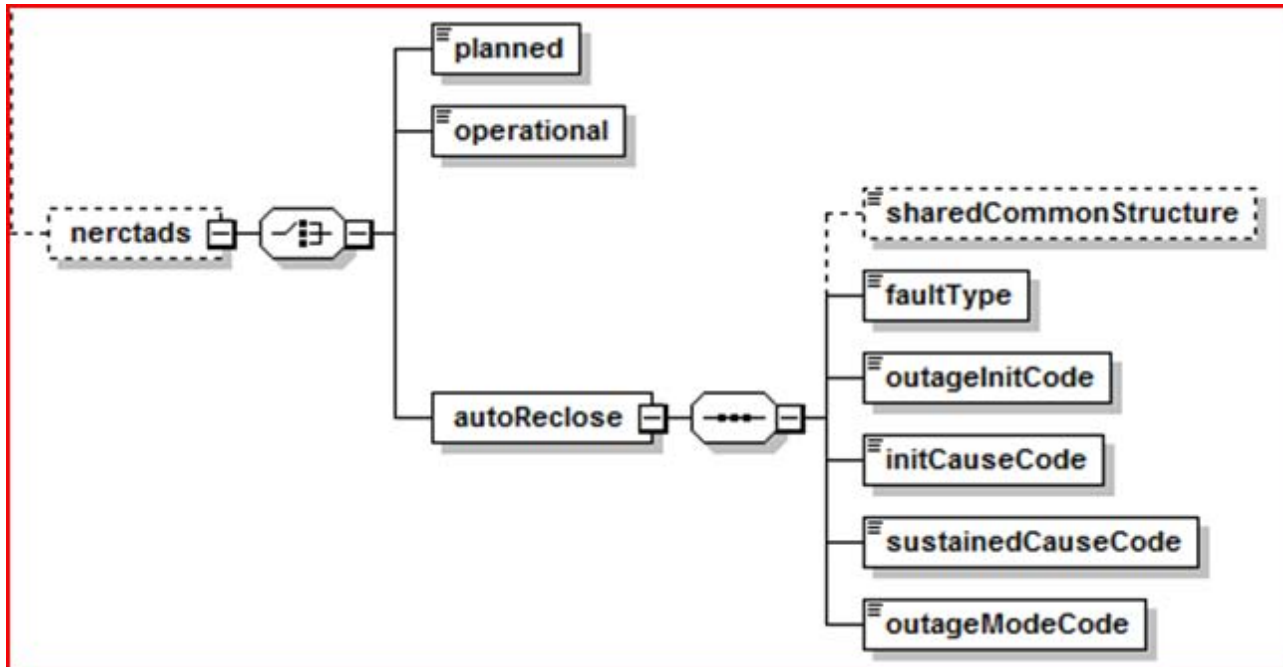


TADS Report Column Translation to eDART with XML

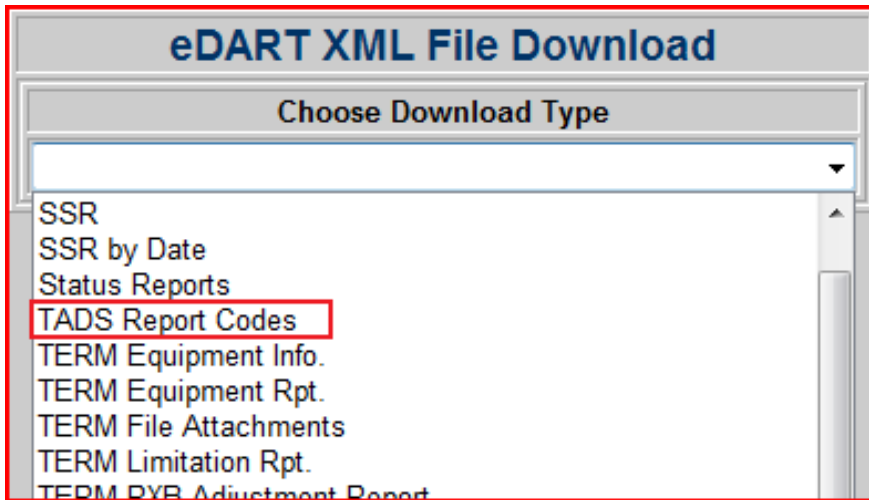
Column	Translation	4.1	4.2	4.3	TADS XML TAGS
Outage ID Code	eDART Ticket Number	X	X	X	OutageIDCode
Voltage Class	Voltage	X	X		VoltageClassCodeName
High-Side Voltage Class	Voltage			X	VoltageClassCodeName
AC Substation Name #1	Station Name	X			SubstationTerminalName1
AC/DC Terminal Name #1	Station Name		X		SubstationTerminalName1
Located at (AC Sub. Name)	Station Name			X	SubstationTerminalName1
TO Element Identifier(AC Circuit)	Equipment Name	X			ElementIdentifierName
TO Element Identifier(DC Circuit)	Equipment Name		X		ElementIdentifierName
TO Element Identifier(Transformer)	Equipment Name			X	ElementIdentifierName
OH or UG	Overhead or Underground	X	X		OHUGName
Start Time	Start Time combination of Active Log and Equipment Start	X	X	X	OutageStartDT
Outage Duration HHHH:MM	Active Log/Equipment End Date – Active Log/Equipment Start Date	X	X	X	OutageDurationNbr
Shared Common Structure	0 – circuit is not on common structures with another circuit. 1 – circuit is on common structures with another circuit.	X			SharedCommonStructure
Fault Type	Fault Type	X	X	X	FaultType
Outage Initiation Code	Outage Initiation Code	X	X	X	OutageInitiationCodeName
Initiation Cause Code	Initiation Cause Code	X	X	X	InitiationCauseCodeName
Sustained Cause Code	Sustained Cause Code	X	X	X	SustainedCauseCodeName
Outage Mode Code	Outage Mode	X	X	X	OutageModeCodeName

- For companies that opted to use the NERC TADS functionality in eDART, user will be asked to include this info in their auto-reclose tickets
 - Note: Values can be entered after the fact in using the GUI form NERC TADS Ticket Update form for those where NERC TADS is optional
 - If for company NERC TADS is mandatory may want to enter auto reclose tickets using the GUI

- XML dictionary, transcreate.xsd, transticrevise.xsd, transticreview.xsd and transticnotifyreview.xsd updated to include new tags and elements.



- SharedCommonStructure is just a 0 or 1
- List of codes to be used when submitting NERC TADS data on a new outage ticket for fields faultType, outageInitCode, initCauseCode, sustainedCauseCode, outageModeCode.

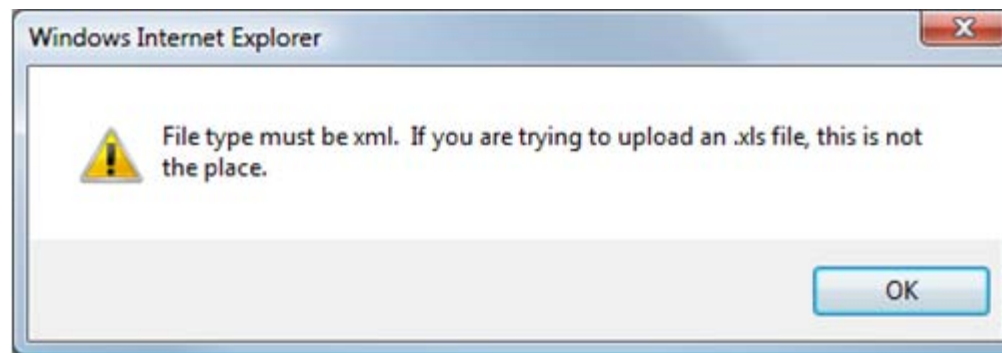


```

<?xml version="1.0" encoding="UTF-8" ?>
- <TADSCodes>
- <faultType>
  <code id="0" description="N/A" />
  <code id="1" description="No fault" />
  <code id="2" description="P-P fault" />
  <code id="3" description="Single P-G fault" />
  <code id="4" description="P-P-G, 3P or 3P-G fault" />
  <code id="5" description="Unknown fault type" />
</faultType>
- <outageInitCode>
  <code id="0" description="N/A" />
  <code id="1" description="Element-Initiated" />
  <code id="2" description="Other Element-Initiated" />
  <code id="3" description="AC Substation-Initiated" />
  <code id="4" description="AC/DC Terminal-Initiated" />
  <code id="5" description="Other Facility-Initiated" />
</outageInitCode>
- <initCauseCode>
  <code id="0" description="N/A" />
  <code id="1" description="Weather, excluding lightning" />
  <code id="2" description="Lightning" />
  <code id="3" description="Environmental" />
  <code id="4" description="Contamination" />
  <code id="5" description="Foreign Interference" />
  <code id="6" description="Fire" />
  <code id="7" description="Vandalism, Terrorism, or Malicious Acts" />
  <code id="8" description="Failed AC Substation Equipment" />
  <code id="9" description="Failed AC/DC Terminal Equipment" />
  <code id="10" description="Failed Protection System Equipment" />
  <code id="11" description="Failed AC Circuit Equipment" />

```

- Only .xml files will be allowed to be submitted via the Upload screen accessed from the Main Menu.
 - Upload of non-XML files should be done through the respective application forms (e.g. TERM Bulk Upload, Blackstart files, Network Model documents).



- Existing issue when user tries to download a large number (in the hundreds of thousands) of tickets at the same time.
- Solution:
 - TERM downloads will be received as a zip file
 - A threshold/limit will be set for number of TERM tickets per download. If this is exceeded, number of tickets returned will be adjusted to be below or equal to the threshold.
 - Warning message displayed if user tries to download more than the allowed number of tickets at the same time.

```
<?xml version="1.0" encoding="UTF-8" ?>  
- <edart xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:noNamespaceSchemaLocation="termreview.xsd">  
  <warning>Due to excessive ticket count request, the number of tickets returned will be X instead of requested amount of Y</warning>
```

QUESTIONS



February 2012 eDART Release Transmission Outage Tickets Enhancements

- Transmission Owners shall use reasonable efforts to submit Transmission Planned Outage schedules one year in advance but are required to submit no later than the first of the month six months in advance of the requested start date for all outages that are expected to exceed five working days duration.
- Transmission Owners are required to provide notice of all transmission outages by the first day of the month preceding the month of the outage.

- 1-month rule: Transmission Owners are required to provide notice of all transmission outages five days or less by the first day of the month proceeding the month of the outage.
 - A 5-day outage starting in June, 2012 must be submitted by 23:59 on April 30, 2012 to be on time.

On Time						5-day outage							
Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	

- 6-Month Rule:** “The TO is required to submit all outage requests in excess of 5 days in duration by the 1st of the month six months in advance of the start of the outage .” M03
 - If a 6-day outage begins in October, the outage must be submitted by 23:59 on March 31 to be on time.

On Time										6-day outage		
Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

- 30-Day Rule: “Outages scheduled for the following Planning year (i.e. June 1 – May 31) exceeding 30 days in duration are to be submitted via eDART by February 1 for use in the annual FTR auction unless the 6-month rule is more restrictive.” M03
 - An outage greater than 30 days starts in September 2012. It must be submitted by:
 - a) 6-month rule: Must be submitted by February 29, 2012 @ 23:59
 - b) 30-day rule: Must be submitted by January 31, 2012 @ 23:59
 - Since the 30-day rule is more restrictive, (b) is the correct choice. The 30-day rule applies.

- If On Time & scheduled outage is ≤ 5 days:
 - and the revised outage request will occur entirely during the originally scheduled month, it will retain its on-time status if applicable.
 - and the revised outage request will occur during a different month, the revision must be submitted by the first of the month prior to the revised month in which the outage will take place to be considered on time.

- If On Time & outage > 5 days:
 - and the revised outage request will occur entirely during the originally scheduled month, it will retain its on time status if applicable.
 - and the outage request moves to a new month which is further out into the future, the revision must be submitted by the first of the month prior to the revised month in which the outage will take place to be considered on time.
 - and the outage request moves to a new month which is nearer to the current date, the revision must be submitted by the first of the month six (6) months prior to the revised month in which the outage will take place to be considered on time.

- If `<submittedOnTime>` is FALSE, a new tag, `<submittedOnTimeComments>`, will be displayed on ticket download with Submit On Time comments.
- Comments will include the date/time the ticket should have been submitted to be considered on time.

QUESTIONS



March 2012 eDART Release

Transmission Outage Tickets Enhancements

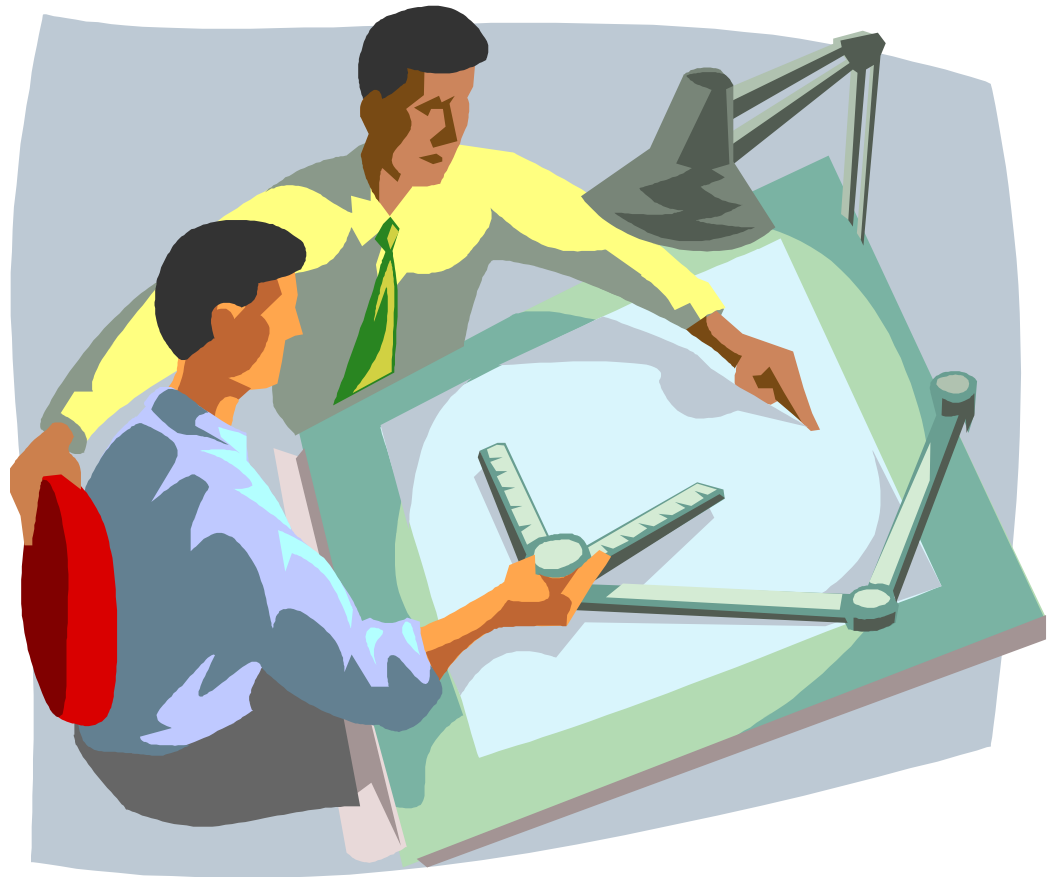
- New attribute for `<ticket_type>` called „**potentially_incomplete**“ to be added for transmission outage tickets review download highlighting ticket may need further review.
- **potentially_incomplete**=“**true**” if either:
 - PJM needs more information on the facilities to be added like in the case where only breakers or disconnects are in the ticket. PJM can manually update the flag.
 - More information is needed in the Description field.

- If **potentially_incomplete**=**“true”**, the ticket will remain in the status of Submitted until the flag is set to **FALSE** by PJM.
 - Users can cancel Potentially Incomplete tickets.

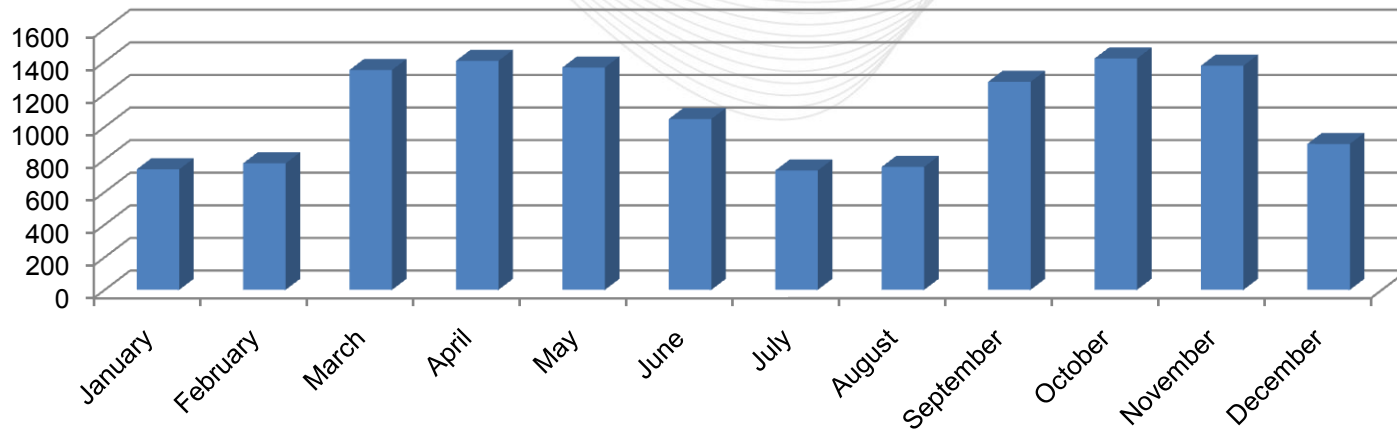
May 2012 eDART Release Transmission Outage Tickets Enhancements

- Please remember what will be shown is still in the early design phase. More to come ...

DRAFT



Tickets Started*



- Many outages scheduled each day by many schedulers
- Certain facilities should never be out at the same time regardless of system conditions
- Outages reviewed during PJM study process
- Better if identified immediately upon submission

*Completed transmission outage tickets excluding EMS Trips started per month in 2010 as stored in eDART as of 11/11/11

- New functionality scheduled to identify outage combinations that should never occur.
- If outage submitted violates a conflict scenario, ticket will be set to new status of „Conflict“.
- Additionally, new outage conflict tags to be added on download of „Conflict“ tickets to display list of conflicting outage tickets.

```
- <conflict>
- <ticket>
  <pjm_ticket_id>11115</pjm_ticket_id>
  <company_ticket_id>Trans Tic</company_ticket_id>
  <status>Approved</status>
</ticket>
- <ticket>
  <pjm_ticket_id>11116</pjm_ticket_id>
  <company_ticket_id>Trans Tic2</company_ticket_id>
  <status>Revised</status>
</ticket>
</conflict>
```

QUESTIONS

