Brussels, 19-20 May 2014

Digital NOTAM Workshop

Item 6 - Digital NOTAM Samples (Event Specification 2.0)

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Content

- Available Digital NOTAM Samples
- AD.CLS example

Digital NOTAM Samples

- For each scenario in the Event Specification 2.0
  - Coding

Examples

Click on the links to access the complete Digital NOTAM (AIXM 5.1 encodings), which are available in the AIXM Wiki.

- ☐ AD closed for all traffic
- ☐ AD closed with schedule
- ☐ AD closed except for special flights

  - Decoding

Examples

The complete Digital NOTAM (AIXM 5.1 encodings) are available in the AIXM Wiki. Only the automatically generated NOTAM text has been copied here.

AD closed for all traffic

```
Q) ENOR/QFALC/IV/NBO/A/000/999/5947N00520E005
A) ENSO
B) 1412151600 C) 1412151700
E) AD CLOSED.
FOR INFO CALL +4792665553.
```

AD closed with Schedule

```
Q) EGTT/QFALC/IV/NBO/A/000/999/5221N000029E005
A) EGUN
B) 1412272300 C) 1412300700
D) DAILY 2300-2359 0000-0700
E) AD CLOSED.
```

Digital NOTAM Samples

- www.aixm.aero/wiki (see data sources link)

[Example] Digital NOTAM Examples

These XML encoding examples correspond to the event examples included in the Digital NOTAM Event Specification version 1.0, but with some adjustments that have been agreed by the Focus Group for the updated version 2.0, which is intended for publication in May 2014. These adjustments concern especially the NOTAM text generation rules.

File	Description
[SAA.ACT] TRA EAR23 active	Activation of a Temporary Reserved Area (TRA)
[SAA.ACT] TOWNSVILLE R736AB active	Activation of a Restricted area, with a daily activation schedule
[SAA.ACT] EBD04 Activity	Activation of a danger area, but which changes the nature of the area - it becomes prohibited for certain flights.
[SAA.ACT] EGD128 active above normal level	Activation of a Danger area above its normal (baseline) upper limit.
[SAA.ACT] LFD186 changed activity	Activation of a Danger area, with a schedule
[ATSA.ACT] CTR Deauville activation	Activation of a CTR area
[ATSA.ACT] CTR New Brive Souillac de-activation	De-activation of a CTR area
[ATSA.ACT] EICM CTR active with schedule	Activation of a CTR with a different schedule as compared to the Baseline data
[SAA.NEW] Restricted area North of Sjaellands Odde	Ad-hoc restricted area with polygon geometry and schedule
[SAA.NEW] Danger Area due to SAR activity	Ad-hoc danger area with circle geometry and extensive annotations
[SAA.NEW] Danger Area within RAPTOR ATCAA	Ad-hoc danger area with polygon geometry, high altitude
[SAA.NEW] Aerobatics at Pferdsfeld.xml	Ad-hoc navigation warning with circle geometry
[ATSA.NEW] Temporary class A airspace excluding Heathrow CTR	Ad-hoc class A airspace - circle geometry, excluding a portion located within a CTR airspace
[RTE.CLS] CDR 1 closure	Temporary closure of a conditional route segment
[RTE.CLS] ATS route portion closure	Temporary closure of a series of route segments, with a common schedule
[RTE.OPN] CDR 2 temporary availability	Temporary availability of a conditional route segment
[AD.CLS] AD closed for all traffic	Temporary full closure
[AD.CLS] AD closed with schedule	Temporary closed airport during night
[AD.CLS] AD closed except for special flights	Temporary closure except certain flights and combinations with aircraft type

For review!

⚠ work in progress

- In addition, “Donlon” data set, etc. -> to be aligned with version 2.0

Content

- Available Digital NOTAM Samples
- AD.CLS example

AD.CLS – Airport/Heliport Closure Scenario

- Definition: Temporary closure of an airport heliport.
  - total closure(any traffic is forbidden) or
  - partial closure(with the exception of particular operations, flights or aircraft categories).

- *This scenario does not cover*
  - *temporary addition of a supplementary restriction to the Airport availability, such as "closed for aircraft heavier than...".*
  - *temporary change of the operational hours of an airport/heliport.*
  - *the situation when the airport is operating normally, but subject to a reason for caution (such as "grass cutting in progress", etc.).*

  All the above will be addressed in different scenarios.

AD.CLS - Examples

- **Airport closed for all traffic**

  E) AD CLOSED.

- **Airport closed for all traffic due to work in progress**

  E) AD CLOSED DUE TO WIP.

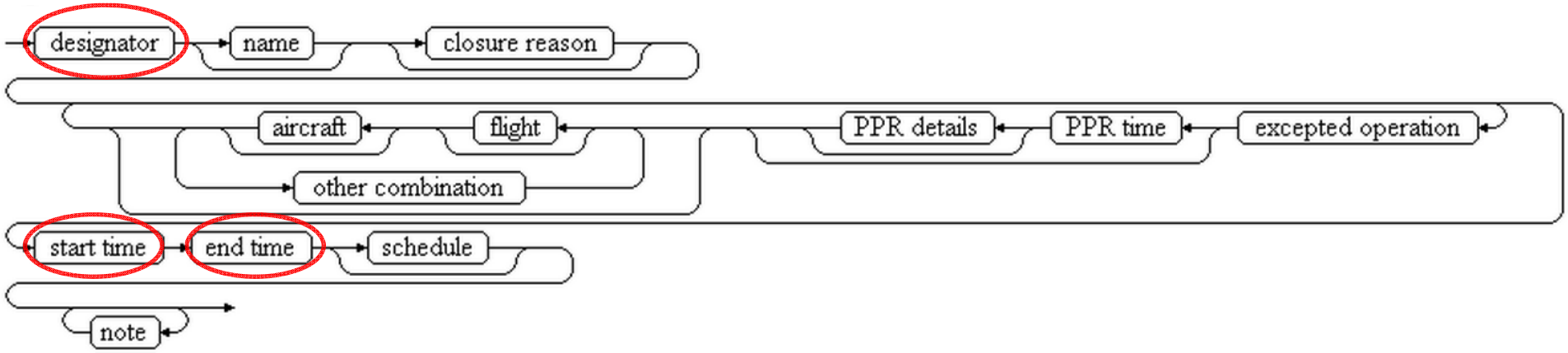
- **Airport closed with exceptions - particular operations**

  E) AD CLOSED EXCEPT FOR LANDING PPR 2 HOURS CONTACT +3907191915603.

- **Airport closed with exceptions - certain flights and combinations with aircraft type**

  E) AD CLOSED EXCEPT FOR HOME BASED ACFT FLT, SEARCH AND RESCUE FLT, HOSP HELICOPTERS FLT.

AD.CLS - Event data



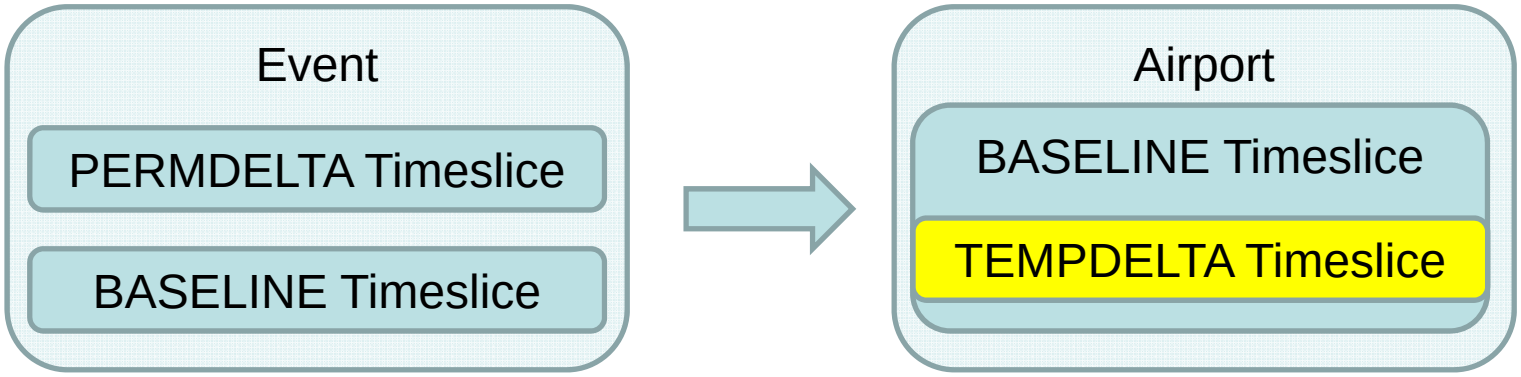
Input data example	Mandatory	Designator: LSGL Start time: 11:57:00 on 13th May 2014 End time: 14:08:00 on 13th May 2014
	excepted operation Optional	Flight: Home based flight
		Flight: Search and Rescue flight *and*
		Aircraft: Helicopter *and* Flight: Hospital

Data input → Digital encoding

AD.CLS – Digital NOTAM Encoding

Assumption:

ER-01	The temporary closure of an airport/heliport shall be encoded as: • a new Event (encoding="DIGITAL", scenario="AD.CLS", version="2.0"), for which PERMDELTA and subsequent BASELINE TimeSlice shall be created; and • a TimeSlice of type TEMPDELTA for the affected AirportHeliport feature, for which the "event:theEvent" property points to the Event instance created above.



AD.CLS - Digital NOTAM Encoding

Event

PERMDELTA Timeslice

```
<message:hasMember>
  <event:Event gml:id="uuid.13bf3af6-d677-49f4-a4ce-e54210dde421">
    <gml:identifier codeSpace="urn:uuid:">13bf3af6-d677-49f4-a4ce-e54210dde421
    </gml:identifier>
    <event:timeSlice>
      <event:EventTimeSlice gml:id="ID_695">
        <gml:validTime>
          <gml:TimeInstant gml:id="ID_696">
            <gml:timePosition>2014-04-13T11:57:00.142Z</gml:timePosition>
          </gml:TimeInstant>
        </gml:validTime>
        <aixm:interpretation>PERMDELTA</aixm:interpretation>
        <aixm:sequenceNumber>1</aixm:sequenceNumber>
        <aixm:featureLifetime>
          <gml:TimePeriod gml:id="ID_697">
            <gml:beginPosition>2014-04-13T11:57:00.142Z</gml:beginPosition>
            <gml:endPosition>2014-04-13T14:08:00.143Z</gml:endPosition>
          </gml:TimePeriod>
        </aixm:featureLifetime>
        <event:encoding>DIGITAL</event:encoding>
        <event:scenario>AD.CLS</event:scenario>
        <event:version>2.0</event:version>
        <event:revision>2014-04-13T11:57:00.142Z</event:revision>
        <event:textNOTAM>
          <event:NOTAM gml:id="ID_698">
            <event:series>D</event:series>
            <event:number>999</event:number>
            <event:year>2011</event:year>
            <event:type>N</event:type>
            <event:issued>2014-04-11T23:57:00.142Z</event:issued>
            <event:affectedFIR>LSGL</event:affectedFIR>
            <event:selectionCode>QFALT</event:selectionCode>
            <event:traffic>IV</event:traffic>
            <event:purpose>NBO</event:purpose>
            <event:scope>A</event:scope>
            <event:coordinates>4633N00637E</event:coordinates>
            <event:radius>005</event:radius>
            <event:location>LSGL</event:location>
            <event:effectiveStart>1404131157</event:effectiveStart>
            <event:effectiveEnd>1404131408</event:effectiveEnd>
            <event:text>AD CLOSED EXCEPT FOR HOME BASED ACFT FLT
            SEARCH AND RESCUE FLT, HOSP HELICOPTERS FLT.
            </event:text>
          </event:NOTAM>
        </event:textNOTAM>
      </event:EventTimeSlice>
    'event:timeSlice>
```

AD.CLS - Digital NOTAM Encoding

Airport

BASELINE Timeslice

TEMPDELTA Timeslice

```
<aixm:AirportHeliportTimeSlice gml:id="ID_703">
  <gml:validTime>
    <gml:TimePeriod gml:id="ID_704">
      <gml:beginPosition>2014-04-13T11:57:00.142Z</gml:beginPosition>
      <gml:endPosition>2014-04-13T14:08:00.143Z</gml:endPosition>
    </gml:TimePeriod>
  </gml:validTime>
  <aixm:interpretation>TEMPDELTA</aixm:interpretation>
  <aixm:sequenceNumber>1</aixm:sequenceNumber>
  <aixm:designator>LSGL</aixm:designator>
  <aixm:availability>
    <aixm:AirportHeliportAvailability gml:id="ID_705">
      <aixm:operationalStatus>CLOSED</aixm:operationalStatus>
      <aixm:usage>
        <aixm:AirportHeliportUsage gml:id="ID_706">
          <aixm:type>PERMIT</aixm:type>
          <aixm:selection>
            <aixm:ConditionCombination gml:id="ID_707">
              <aixm:logicalOperator>OR</aixm:logicalOperator>
              <aixm:flight>
                <aixm:FlightCharacteristic gml:id="ID_709">
                  <aixm:origin>HOME_BASED</aixm:origin>
                </aixm:FlightCharacteristic>
              </aixm:flight>
              <aixm:flight>
                <aixm:FlightCharacteristic gml:id="ID_710">
                  <aixm:status>SAR</aixm:status>
                </aixm:FlightCharacteristic>
              </aixm:flight>
              <aixm:subCondition>
                <aixm:ConditionCombination gml:id="ID_777">
                  <aixm:logicalOperator>AND</aixm:logicalOperator>
                  <aixm:aircraft>
                    <aixm:AircraftCharacteristic gml:id="ID_778">
                      <aixm:type>HELICOPTER</aixm:type>
                    </aixm:AircraftCharacteristic>
                  </aixm:aircraft>
                  <aixm:flight>
                    <aixm:FlightCharacteristic gml:id="ID_711">
                      <aixm:status>HOSP</aixm:status>
                    </aixm:FlightCharacteristic>
                  </aixm:flight>
                </aixm:ConditionCombination>
              </aixm:subCondition>
            </aixm:ConditionCombination>
          </aixm:selection>
          <aixm:operation>ALL</aixm:operation>
        </aixm:AirportHeliportUsage>
      </aixm:usage>
    </aixm:AirportHeliportAvailability>
  </aixm:availability>
  <aixm:extension>
    <event:AirportHeliportExtension gml:id="ID_712">
      <event:theEvent xlink:href="#uuid.13bf3af6-d677-49f4-a4ce-e54210dde421" />
    </event:AirportHeliportExtension>
  </aixm:extension>
```

AD.CLS - Digital NOTAM Encoding

ER-02	One AirportHeliportAvailability element having operationalStatus=CLOSED shall be included in the AirportHeliport TEMPDELTA.

```
<aixm:availability>
  <aixm:AirportHeliportAvailability gml:id="ID_705">
    <aixm:operationalStatus>CLOSED</aixm:operationalStatus>
```

ER-03	If the airport/heliport is "closed except for" specified operations, flight and/or aircraft categories, all specified excepted operations shall be encoded as AirportHeliportUsage child elements with: • either type=PERMIT, if there is no prior permission requirement; • or type=CONDITIONAL, if a prior permission requirement was specified. Note that this implies that a "closed" airport/heliport can still allow certain particular operations. In either situation, the operation shall be specified.

```
<aixm:usage>
  <aixm:AirportHeliportUsage gml:id="ID_706">
    <aixm:type>PERMIT</aixm:type>
```

AD.CLS - Digital NOTAM Encoding

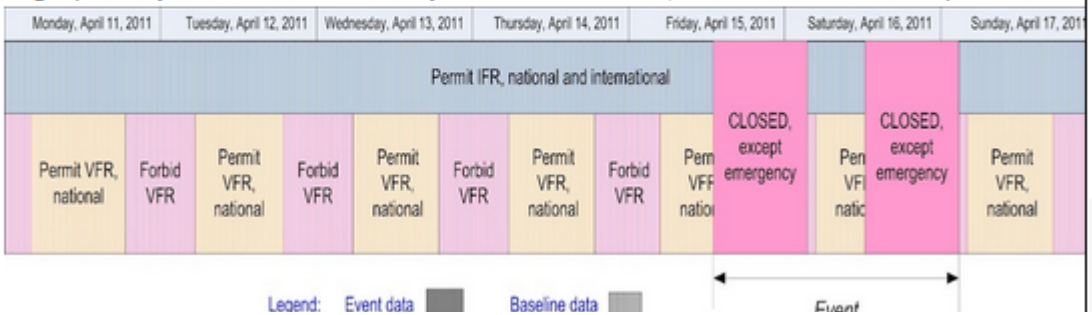
ER-04	If a unique flight or aircraft are specified as being excepted, they shall be encoded as one ConditionCombination with logicalOperator="NONE".
ER-05	Each pair of flight and aircraft conditions specified as being excepted shall be encoded as one ConditionCombination with logicalOperator="AND".

```
<aixm:subCondition>
  <aixm:ConditionCombination gml:id="ID_777">
    <aixm:logicalOperator>AND</aixm:logicalOperator>
    <aixm:aircraft>
      <aixm:AircraftCharacteristic gml:id="ID_778">
        <aixm:type>HELICOPTER</aixm:type>
      </aixm:AircraftCharacteristic>
    </aixm:aircraft>
    <aixm:flight>
      <aixm:FlightCharacteristic gml:id="ID_711">
        <aixm:status>HOSP</aixm:status>
      </aixm:FlightCharacteristic>
    </aixm:flight>
  </aixm:ConditionCombination>
</aixm:subCondition>
```

ER-06	If the "other combination" branch is used, then a root ConditionCombinations element shall be encoded having logicalOperator="OR" and each pair of flight/aircraft included as a sub-condition (with logicalOperator="AND", see ER-05).

```
<aixm:selection>
  <aixm:ConditionCombination gml:id="ID_707">
    <aixm:logicalOperator>OR</aixm:logicalOperator>
```

AD.CLS - Digital NOTAM Encoding

ER-07	If the airport closure is limited to a discrete schedule within the overall time period between the "start time" and the "end time", then this shall be encoded using as many as necessary timeInterval/Timesheet properties for the AirportHeliportAvailability of the AirportHeliport TEMPDELTA Timeslice. See the rules for Event Schedules.
ER-08	In accordance with the AIXM Temporality Concept (see sections 3.4 and 3.5 in version 1.0), the ManoeuvringAreaAvailability elements included in the TEMPDELTA completely replace all the BASELINE ManoeuvringAreaAvailability information, during the TEMPDELTA time of applicability. Therefore, if the closure only concerns certain times, then the other times, when the runway eventually remains subject to the availability conditions of the Baseline data, shall be explicitly included in the TEMPDELTA. The calculation of the necessary additional ManoeuvringAreaAvailability elements to be included in the TEMPDELTA shall be automatically done by the applications implementing this specification. All ManoeuvringAreaAvailability elements that are copied from the BASELINE data for completeness sake shall get an associated Note with purpose=REMARK and the text="Baseline data copy. Not included in the NOTAM text generation". This is based on the current NOTAM practice which consists of including in the NOTAM only the changed information and not explicitly including the static data that remains valid during the NOTAM applicability.It is recommended that the input interface provides a "calendar" view of each runway direction closure, enabling the operator to graphically check the availability at different times, such as in the example below: 

AD.CLS - Decoding particularities

- Item Q

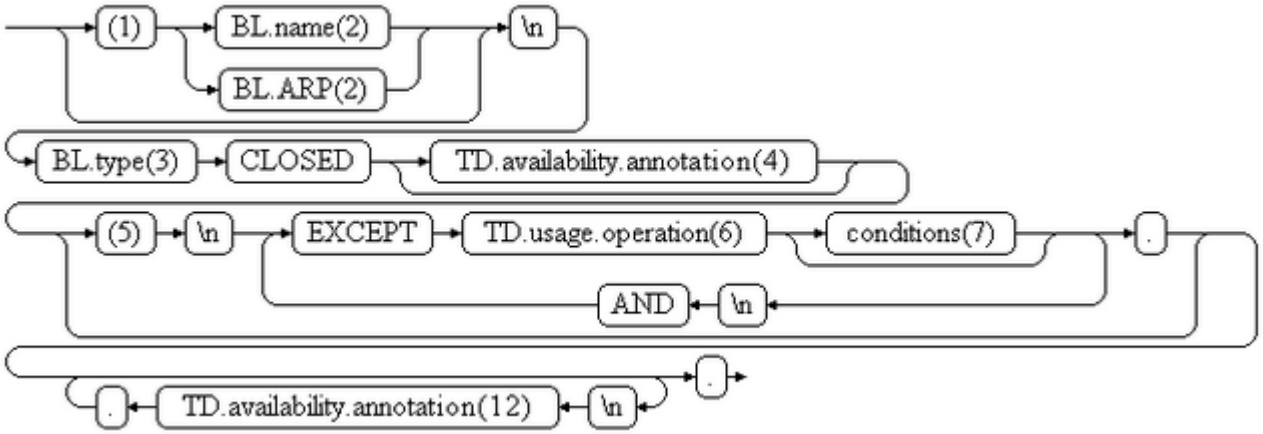
```
<event:affectedFIR>LSGL</event:affectedFIR>
<event:selectionCode>QFALT</event:selectionCode>
<event:traffic>IV</event:traffic>
<event:purpose>NBO</event:purpose>
<event:scope>A</event:scope>
<event:coordinates>4633N00637E</event:coordinates>
<event:radius>005</event:radius>
```

If **BL.type** has **any other value than "HP"**

TD.availability.AirportHeliportAvailability.usage	***Q code***
none specified	QFALC
a unique one, having AirportHeliportUsage.type="PERMIT" and a descendant flight.FlightCharacteristic.military="MIL"	QFAAM
at least one AirportHeliportUsage.type="CONDITIONAL"	QFAAP
a unique one, having AirportHeliportUsage.type="PERMIT" and a descendant flight.FlightCharacteristic.military="HOME_BASED"	QFALB
any other combination	QFALT

AD.CLS – Digital NOTAM Decoding

- Item A <aixm:designator>LSGL</aixm:designator>
- Item B <gml:beginPosition>2014-04-13T11:57:00.142Z</gml:beginPosition>
- Item C <gml:endPosition>2014-04-13T14:08:00.143Z</gml:endPosition>
- Item E



ICAO NOTAM format

D999/14 NOTAMN
Q)LSGL/QFALT/IV/NBO/A/000/999/4633N00637E005
A)LSGL
B)1404131157 C)1404131408
E) AD CLOSED EXCEPT FOR HOME BASED ACFT FLT, SEARCH AND RESCUE FLT, HOSP HELICOPTERS FLT.

Complete lifecycle example

AIRPORT CLOSURE
Multiple scenarios :

Start	*Scenario*
	Airport commissioning.
Start of Validity	2013-01-01 T 00:00:00 Z
End of Validity	unknown
Digital NOTAM File	Airport_commissioning.xml

1	*Scenario*	*Text NOTAM*
	Airport closed for all traffic.	A1991/13 NOTAMN Q) LIRR/QFALC/IV/NBO/A/000/999/4255N01242E005 A) LIAF B) 1301071500 C) 1301072200 E) AD CLOSED
Start of Validity	2013-01-07 T 15:00:00 Z	
End of Validity	2013-01-07 T 22:00:00 Z	
Digital NOTAM File	DN_1_Airport_closed_for_all_traffic.xml	

2	*Scenario*	*Text NOTAM*
	Airport closed for all traffic (WIP) - estimated end of validity -	A1992/13 NOTAMN Q) LIRR/QFALC/IV/NBO/A/000/999/4255N01242E005 A) LIAF B) 1301090630 C) 1301101830EST E) AD CLOSED DUE TO WIP
Start of Validity	2013-01-09 T 06:30:00 Z	
End of Validity	2013-01-10 T 18:30:00EST Z	
Digital NOTAM File	DN_2_Airport_closed_estimated_end.xml	

3	*Scenario*	*Text NOTAM*
	NOTAMR Airport closed for all traffic (WIP) - end of validity update -	A1993/13 NOTAMR A1992/13 Q) LIRR/QFALC/IV/NBO/A/000/999/4255N01242E005 A) LIAF B) 1301100523 C) 1301102100 E) AD CLOSED DUE TO WIP
Start of Validity	2013-01-10 T 05:23:00 Z	
End of Validity	2013-01-10 T 21:00:00 Z	
Digital NOTAM File	DN_3_Airport_closed_updated_end.xml	

Complete lifecycle example

4*	*Scenario*	*Text NOTAM*
	Airport closed with schedule (daily) -daily from 2200 to 1000 -	A1994/13 NOTAMN Q) LIRR/QFALC/IV/NBO/A/000/999/4255N01242E005 A) LIAF B) 1301142200 C) 1301200600 D) DAILY 2200 - 0600 E) AD CLOSED
Start of Validity	2013-01-14 T 22:00:00 Z	
End of Validity	2013-01-20 T 06:00:00 Z	
Digital NOTAM File	DN_4_Airport_closed_daily_schedule.xml	

5	*Scenario*	*Text NOTAM*
	Airport closed with schedule (date based) - JAN 21,22 (10:00 - 1200) 23 (14:00 - 16:00) -	A1995/13 NOTAMN Q) LIRR/QFALC/IV/NBO/A/000/999/4255N01242E005 A) LIAF B) 1301211000 C) 1301231600 D) JAN 21-22 1000-1200 AND JAN 23 1400-1600 E) AD CLOSED
Start of Validity	2013-01-21 T 10:00:00 Z	
End of Validity	2013-01-23 T 16:00:00 Z	
Digital NOTAM File	DN_5_Airport_closed_date_schedule.xml	

6	*Scenario*	*Text NOTAM*
	Airport closed with schedule (weekday) -every Saturday from 0800 till Sunday sunset -	A1996/13 NOTAMN Q) LIRR/QFALC/IV/NBO/A/000/999/4255N01242E005 A) LIAF B) 1301260800 C) 1302172330 D) SAT 0800 - SUN SS E) AD CLOSED
Start of Validity	2013-01-26 08:00:00 Z	
End of Validity	2013-02-17 23:30:00 Z	
Digital NOTAM File	DN_6_Airport_closed_weekday_schedule.xml	

7	*Scenario*	*Text NOTAM*
	Airport closed with exceptions - particular operations -	A1997/13 NOTAMN Q) LIRR/QFALT/IV/NBO/A/000/999/4255N01242E005 A) LIAF B) 1302251000 C) 1302251200 E) AD CLOSED EXCEPT FOR LANDING PPR 2 HOURS CONTACT +3907191915603
Start of Validity	2013-02-25 T 10:00:00 Z	
End of Validity	2013-02-25 T 12:00:00 Z	
Digital NOTAM File	DN_7_Airport_closed_except_operations.xml	

Complete lifecycle example

8	*Scenario*	*Text NOTAM*
	Airport closed with exceptions - particular flights-	A1998/13 NOTAMN Q) LIRR/QFALT/IV/NBO/A/000/999/4255N01242E005 A) LIAF B) 1303041130 C) 1303051730 E) AD CLOSED EXCEPT FOR MIL TRAINING FLT
Start of Validity	2013-03-04 T 11:30:00 Z	
End of Validity	2013-03-05 T 17:30:00 Z	
Digital NOTAM File	DN_8_Airport_closed_except_flights.xml	

9*	*Scenario*	*Text NOTAM*
	NOTAMC Airport closed with exceptions - new NOTAM to follow -	A1999/13 NOTAMC A1998/13 Q) LIRR/QFACN/IV/NBO/A/000/999/4255N01242E005 A) LIAF B) 1303041207 C) E) AD RESUMED NORMAL OPERATIONS NEW NOTAM TO FOLLOW
Start of Validity	2013-03-04 T 12:07:00 Z	
End of Validity	-	
Digital NOTAM File	DN_9_Airport_closed_cancel.xml	

10	*Scenario*	*Text NOTAM*
	Airport closed with exceptions - aircraft categories -	A 2000/13 NOTAMN Q) LIRR/QFALT/IV/NBO/A/000/999/4255N01242E005 A) LIAF B) 1303050715 C) 1303051200 E) AD CLOSED EXCEPT FOR ULM, LIGHTS ACFT WITH WINGSPAN EQUAL OR SMALLER THAN 10 M
Start of Validity	2013-03-05 T 07:15:00 Z	
End of Validity	2013-03-05 T 13:00:00 Z	
Digital NOTAM File	DN_10_Airport_closed_except_aircraft.xml	

End	*Scenario*
	Airport decommissioning.
Start of Validity	2013-01-01 T 00:00:00 Z
End of Validity	2020-01-01 T 00:00:00 Z
Digital NOTAM File	Airport_decommissioning.xml

Will be published on Wiki aligned with DNES 2.0