



ITUEvents

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www.itu.int/go/ITU-R/WRS-18



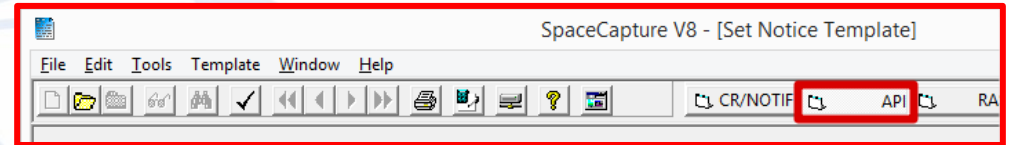
Converting an API to Notification

Nick Sinanis



Open API to Convert

- Our input file will be that of the **solution of the API capturing exercise**
- **Launch SpaceCap**
 - Select **API template** at the top
- **Navigate to:**
<USB>\Space Workshop\Day 3\API Exercise\solution
- **Open File: API - solution file**
- **Then, click on Notice Explorer**





Clone API as a Notification

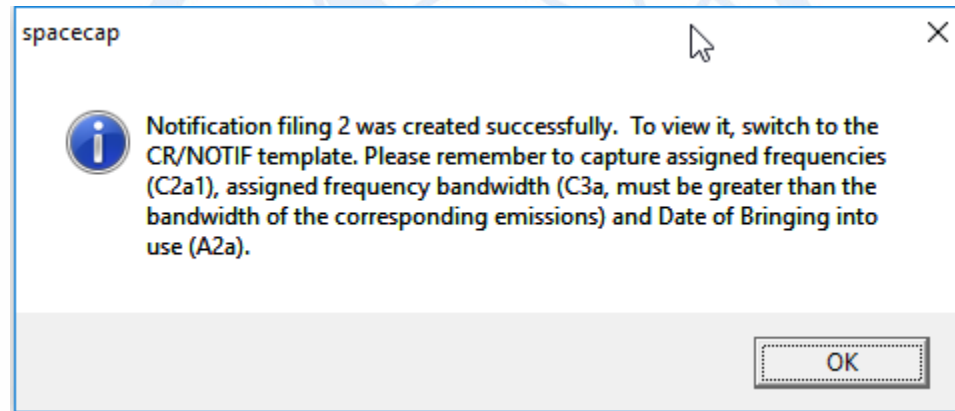
The screenshot shows the SpaceCapture V8 software interface. The 'Tools' menu is open, and the 'Clone API as a Notification' option is highlighted with a red box. The main window displays a table titled 'Advance Publication' with the following data:

Pos.	Station name	Date rcv.	Status
	CUBESAT-1	01.08.18	01

A 'Count=1' label is visible in the top right corner of the table area.



Pay attention to the message





Locate Converted notice

The screenshot shows the SpaceCapture V8 software interface. The title bar reads "SpaceCapture V8 - [Set Notice Template]". The menu bar includes "File", "Edit", "Tools", "Template", "Window", and "Help". The toolbar contains various icons, with the "CR/NOTIF" icon highlighted by a red box. The main window is titled "Notice Explorer - AP4/II and AP4/III". It displays a table with the following columns: "Notice id.", "Type", "Adm./Org.", "Orb. Pos.", "Station name", "Date rcv.", and "Status". A "List of notices" folder is expanded, showing a single entry: "000000002 [A] N SUI/ CUBESAT-1 01.08.18 01". A "Control Box" on the right side of the table contains buttons for "Show", "Clone", and "Export".

Notice id.	Type	Adm./Org.	Orb. Pos.	Station name	Date rcv.	Status
000000002 [A]	N	SUI/		CUBESAT-1	01.08.18	01

- Chose **CR/NOTIF** template



Capturing Additional Elements

- **Switch to beam UPLINK and select the 'Group' tab**
 - Enter in C3a (Assigned frequency bandwidth): 15
 - Switch to Frequencies tab and enter: 145.5 M
- **Switch to beam DOWNLINK and select the 'Group' tab**
 - Enter in C3a (Assigned frequency bandwidth): 120
 - Click on the big button 'General Characteristics' and
 - *Enter the A2a bringing into use: accept the default value*
 - *Click on the 'Apply to all groups in this notice' button at the bottom*
 - Enter in C8d1 'Maximum Total Peak Power': 0
 - Enter in C8d2 'Contiguous Bandwidth': 120
 - Switch to Frequencies tab and enter: 437.5 M



Update Notice Data

SpaceCapture V8

File Edit Tools View Window Help

CR/NOTIF API RAST PLAN RS4

NonGeoStationary Notice:2

Notice Station Beam Attachments

Notice Id: 2 AP4/II and AP4/III (Appendix 4 - Annex 2A) 31.10.13 Status 01

Notice submitted under/for:

No. 9.6 Coordination No. 11.2 Notification First Notification Resubmission

No. 9.11A Applies Bands 21.4 to 22 GHz Special Procedure

Specific Earth Station Coordination under No. 9.7A Earth Station Coordination under No. 9.21

Earth Station Coordination between Administrations under No. 9.17

Date: DD.MM.YY 01.08.18 Administration Serial Nbr

A1f1. Notifying Administration SUI A1f2. Notice submitted on behalf of these administrations. + x

A1f3. Intergovernmental Satellite System

Notice intended for

Addition Modification Suppression

BR Identification No. of Station to be modified/suppressed

Type of Satellite Network or Earth Station

GeoStationary Satellite Network Specific Earth Station

NonGeoStationary Satellite Network Typical Earth Station

- Click on **First Notification**



Update Group Data

SpaceCapture V8

File Edit Tools View Window Help

CR/NOTIF API RAST PLAN RS49/552

NonGeoStationary Notice:2

Coordination Notice	Special Section Station	Assoc Earth Station Beam	Assoc Space Station Group	Attachments Emissions	Frequencies
---------------------	-------------------------	--------------------------	---------------------------	-----------------------	-------------

Notice: 2 Satellite Network: CUBESAT-1 Beam Id: UPLINK R Group Id: 4 Split Grp Id:

3. Observed Frequencies and Related Characteristics

Add Mod Sup of the group BR Identification of the Group to be modified/suppressed Page No. BR Data

Characteristics Common to a Group of Frequencies **General Characteristics**

C3a. Assigned Frequency Bandwidth 15 (kHz)

No Sensors Active Sensors Passive Sensors

C4a. Cls Stn	C4b. Nat Srv
EA	CP

C2c. Frequency assignments are filed under No.4.4 BR97 No.11.43A B4b5. Peak Pfd

C6. Polarization Type: CR Circular Direct Polarization If linear, provide angle

C5a. Receiving System Noise Temperature: 300 Kelvins

- Enter C.3.a **15 kHz**



Capture Assigned Frequencies

SpaceCapture V8

File Edit Tools View Window Help

CR/NOTIF API RAST PLAN RS49/55

NonGeoStationary Notice:2

Coordination Notice	Special Section Station	Assoc Earth Station Beam	Assoc Space Station Group	Attachments Emissions	Frequencies
---------------------	-------------------------	--------------------------	---------------------------	-----------------------	-------------

Notice Id: 2 Adm: SUI Satellite Network: CUBESAT-1 Beam Id: UPLINK R Group Id: 4

C2a1. Assigned Frequencies	k/M/GHz
145.500000	M

- Enter **145.5** and **M**



Switch to Beam DOWNLINK

SpaceCapture V8

File Edit Tools View Window Help

CR/NOTIF API

NonGeoStationary Notice:2

Notice	Station	Beam	Group	Attachments
--------	---------	------	-------	-------------

Notice Id: 2 Administration: SUI Satellite Network: CUBESAT-1

Characteristics of the Beam

B2. Receiving Beam Transmitting Beam

B1a. Beam Designation: **DOWNLINK**
Old Beam Designation (if changed):

B1b. Steerable Beam:

Add of the Beam: Add Mod Sup

Beam Sensor:

Antenna Characteristics

B3a1. Maximum Isotropic Gain +/- dBi: 3

B4a. Orbit Link:



Capture Group Data

SpaceCapture V8

File Edit Tools View Window Help

CR/NOTIF API RAST PLAN RS49

NonGeoStationary Notice:2

Coordination Notice	Special Section Station	Assoc Earth Station Beam	Assoc Space Station Group	Attachments Emissions	Frequencies
---------------------	-------------------------	--------------------------	---------------------------	-----------------------	-------------

Notice: 2 Satellite Network: CUBESAT-1 Beam Id: DOWNLINK E Group Id: 3 Split Grp Id:

3. Observed Frequencies and Related Characteristics

Add Mod Sup of the group BR Identification of the Group to be modified/suppressed Page No. BR Data

Characteristics Common to a Group of Frequencies General Characteristics

C3a. Assigned Frequency Bandwidth: 120 (kHz)

No Sensors Active Sensors Passive Sensors

C4a. Cls Stn	C4b. Nat Srv
EA	CP

C2c. Frequency assignments are filed under No.4.4 BR97 No.11.43A -B4b5. Peak Pfd

C6. Polarization Type: CR Circular Direct Polarization If linear, provide angle: °

C8d1. Maximum Total Peak Power: 0 dBW

C8d2. Contiguous Bandwidth: 120 (kHz)

C11a. Service Area as List of Countries or Geographic designations: SUI

- C.3.a 120
- C.8.d.1 0
- C.8.d.2 120



Capture Group Data (2)

The screenshot shows the SpaceCapture V8 software interface. The main window is titled 'NonGeoStationary Notice:2'. The 'Assoc Space Station Group' tab is selected and highlighted with a red box. Below the tabs, the 'Notice' field is set to 2, 'Satellite Network' is CUBESAT-1, 'Beam Id' is DOWNLINK E, and 'Group Id' is 3. The '3. Observed Frequencies and Related Characteristics' section has 'Add' selected. The 'Characteristics Common to a Group of Frequencies' section is active, with the 'General Characteristics' sub-tab highlighted in red. This sub-tab contains several fields: 'C3a. Assigned Frequency Bandwidth' is 120 (kHz); 'C4a. Cls Stn' is EA and 'C4b. Nat Srv' is CP; 'C6. Polarization' is CR Circular Direct Polarization; 'C8d1. Maximum Total Peak Power' is 0 dBW; and 'C8d2. Contiguous Bandwidth' is 120 (kHz). There are also checkboxes for 'C2c. Frequency assignments are filed under No.4.4', 'BR97 No.11.43A', and 'B4b5. Peak Pfd'. A 'C11a. Service Area as List of Countries or Geographic designations' field contains 'SUI'.

- Click on **General Characteristics** Button



Capture Date of Bringing into Use

SpaceCapture V8

File Edit Tools View Window Help

CR/NOTIF API RAST PLAN

NonGeoStationary Notice:2

Coordination Notice	Special Section Station	Assoc Earth Station Beam	Assoc Space Station Group	Attachments Emissions	Frequencies
---------------------	-------------------------	--------------------------	---------------------------	-----------------------	-------------

Notice: 2 Satellite Network: CUBESAT-1 Beam Id: DOWNLINK E Group Id: 3 Split Grp Id:

3. Observed Frequencies and Related Characteristics

Add Mod Sup of the group BR Identification of the Group to be modified/suppressed Page No. BR Data

Characteristics Common to a Group of Frequencies | General Characteristics

A2a. Date Bringing into use: 106.12.18

A2b. Period of Validity: 1 Years

Clear Date Bringing into use, uncheck the checkbox in the date control.

A3a. Operating Administration or Agency: 012 ... EPFL - ECOLE POLYTECHNIQUE FEDERALE DE LAUSANNE

A3b. Responsible Administration: A ... FEDERAL OFFICE OF COMMUNICATION

To apply this information to other groups, select the beam or notice option.

Apply to current group only Apply to all groups in this beam Apply to all groups in this notice

- Apply to all groups



Capture Assigned Frequencies

The screenshot shows the SpaceCapture V8 software interface. The main window displays a 'NonGeoStationary Notice:2' with the following details:

- Notice Id: 2
- Adm: SUI
- Satellite Network: CUBESAT-1
- Beam Id: DOWNLINK E
- Group Id: 3

Below the notice details, there is a table titled 'C2a1. Assigned Frequencies' with the following data:

	k/M/GHz
▶	437.500000 M

- Enter **437.5 M**



Capture API/A Special Section

SpaceCapture V8

File Edit Tools View Window Help

CR/NOTIF API RAST PLAN

NonGeoStationary Notice:2

Notice Coordination	Station Special Section	Beam Assoc Earth Station	Group Assoc Space Station	Emissions Attachments	Frequencies
---------------------	-------------------------	--------------------------	---------------------------	-----------------------	-------------

Notice Id: 2 Adm: SUI Satellite Network: CUBESAT-1 Beam Id: DOWNLINK E Group Id: 3

Information Common to List of Groups in this Beam

A13.

Special Section AR11/A (RR 1042)	
Special Section AR11/C (RR 1060)	
Special Section ART. 14 (RR 1610)	
Special Section API/A (9.1)	1234
Special Section CR/C (9.6)	
Special Section AP30-30A/F/C	

Other Special Sections	
Reference	Number

To apply Special Section data to other groups, select the beam or notice option. Apply to current group only Apply to all groups in this beam Apply to all groups in this notice

- Apply to all groups



Start SpaceVal

Space Validation 8.0.17 (15.11.18)

Operator Id: SINANIS

Database Type:
 Ingres: DSN []
 MS-Access

User Role:
 As a BR user
 As an outside user

Database Info:
Location: f:\space workshop\day 3\api exercise\solution\api -
Notice Id: 2 [] CUBESAT-1

Validation Options:
 Straps not provided - optional under Appendix 4
 Check frequency overlap using assigned frequency bandwidth

Cross validation with Gims mdb file
Gims database: []

Select Validation / Error Msg options and Start Validation

Buttons: Open, Validate, Report, Help, Exit

- Open API Solution mdb and select NTC_ID 2



Validation Report

SNS Validation Errors

Rule Report First Prev Next Last Space Rules Earth Rules Plan Rules Items Summary Fat

Validation Report for 2 User SINANIS created on 06.12.18 10:39:39 with SpaceVal 8.0.17
F:\Space Workshop\Day 3\API Exercise\solution\API - solution file.mdb
Ntc ID: 2 Adm: SUI Sat Name: CUBESAT-1 Action:A Status:01 D_RCV: 01.08.18
Fatal Errors: 0 Warnings: 2

Beam	E/R	Grp id	Table	Field	Value	Row no	Val err	Rule	Severit	Ap4_Ref	Text
			non_geo	sat_name	CUBE SAT-1		200	2	W	A.1.a	Satellite name not in ref table
				sat_name	CUBE SAT-1		200	3	W	A.1.a	Invalid satellite name or action-code value



Thank you!

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