Introduction to BR Space Software V7
Applications

PC based:
- SpaceQry
- SpaceCap
- SpaceVal
- SpacePub
- SpaceCom
- GIMS
- GIBC
- SPS
- Ap7Capture

Web
- SNS-on-Line
- SNL-on-Line

Software Distribution
- BR IFIC DVD ROM
- Downloadable from ITU web site
Conversion Tool from SNS V6 to V7

SNS V6 Environment
- AP30B V6
- SPS_ALL V6
- IFIC V6
- Capture V6

SNS V7 Environment
- AP30B V7
- SPS_ALL V7
- IFIC V7
- Capture V7

SRSCconvert6to7
SAM V7 – Space Applications Manager

[Image of the SAM V7 interface showing various applications such as SpaceCap, SpaceVal, SpacePub, SpaceQry, GIMS, SRSConvert, AP7Capture_v7, GIIBC, ID'WM, SRSFixV7]
Space Software and Databases

- **SpaceQry** (query & extract)
- **GIBC** (examination)
- **MSPACEg** (Plans)
- **ESCC** (graphics)
- **GIMS** (Export gxt file)
- **GIMS DB**
- **Local DB**
- **SPS AP30B**
- **IFIC**
- **SNS**
- **AP30B**
- **SpacePub** (publications)
- **SpaceVal** (validation)
- **SpaceCap** (capture)
- **SpaceCom** (comments)
- **SpaceRefDB**

Connections:
- Export ascii file
- Export gxt file
- Query & extract
- Capture
- Examination
- Plans
- Graphics
- Publications
- Validation
- Capture
- Comments
- TSUM
- IFIC
SpaceCap

- Software for electronic capture of data elements to be furnished in notices relating to space stations
- SpaceCap includes interfaces to capture notice information for:
  - Satellites, EarthStations, Radioastronomy, API, Res 49, Space Plans
- SpaceCap Wizards:
  - Groups, RS49, DBIU, Submit to ITU, Plan – Strapping
- Tools for:
  - Cost recovery, Groups correction
- SpaceVal integration and assisted error correction facility

http://www.itu.int/itu-r/software/space/spacecap
SpaceCom

Capture system for comments on Special Sections.

Designed to assist administrations and the Bureau in the management of the comments on four types of Special Sections:

- CR/C different forms of coordination, now also 9.41
- API/A
- AP30/E, AP30A/E AP30-30A/E Part A
- AP30-30A/F/C

http://www.itu.int/itu-r/software/space/spacecom
SpaceQry

The Space Query and Extract System
- Accesses and queries all BR formatted Space Databases
- Produces extracts based on the results of the queries

Other characteristics
- Full access to graphical data through GIMS
- Link to Space publications software

http://www.itu.int/itu-r/software/space/spaceqry
SpacePub

- Software for publications of satellite networks/earth stations from a SRS formatted database.
- Produces an RTF, printable document
- Following forms of notice:
  - Satellite and earth stations;
  - Radioastronomy stations;
  - Advance publication;
  - RS49 notice form relating to the administrative due diligence procedure;
- Publications in 6 languages

http://www.itu.int/itu-r/software/space/spacepub
SpaceVal

- Software for Validation
  - Completeness of the forms
  - Correctness
- Operation modes
  - Standalone application— Full validation
  - Integrated in Spacecap (Interactive mode) to validate while capturing data
- Validation Rules for Satellite, Earth Stations and Plan networks
- Crossvalidation with GIMS

http://www.itu.int/itu-r/software/space/spaceval
GIMS

Graphical Interference Management System
- GIMS databases management
- View, capture and modification of graphical data
- GXT format management
- PFD, Gain interpolation tools

Types of diagrams:
- Antenna Gain
- Service area
- AG/GSO

Now including also non-GSO, in the forms of images, only for perusal

http://www.itu.int/itu-r/software/space/gims
Technical examination to determine coordination requirements on satellite networks.

Satellite networks, based in criteria:

- **PFD**
- Appendix 8 Noise temperature and Application of the coordination arc.
- Appendix 30B C/I

**Earth Stations:**

- Appendix 7 coordination area
SPS

SPS – Software for the determination of the coordination requirements for the Plans for space networks in Appendices 30 and 30A

Consists of 3 major components:

- MSPACEg software for compatibility analyses
- SPS reporting tool
- Utility to update reference situation of BSS Plans/Lists.

http://www.itu.int/itu-r/software/space/MSPACEg_files
SNS-ON-LINE

- Gives access to the Space Networks Systems Database
- Query system (General or Special queries)
- Help, FAQ and news
- Retrieval, download information
- Submission utilities
- Grafics (GIMS and ESCC)
- TIES Registered users

http://www.itu.int/sns
Basic information concerning planned or existing space stations, earth stations and radio astronomy stations

**SNL Part A:** Use of the frequency spectrum, the occupancy of the geostationary orbit and non-geostationary orbit

**SNL Part B:** all reference publications (special sections and PARTs) related to the space services

**SNL Part C:** information on pending networks - received but not yet published by the Bureau

http://www.itu.int/space/snl
Space networks and related software

Space networks and related software

AP7Capture
AP7Capture - Capture system for AP7 input parameters
Software package which allows the capture and modification of data that is relevant to the AP7 Analysis.

GIBC
Electronic submission of graphical Data
Description of the format for electronic submission of graphical data related to satellite networks.

GIMS
Electronic submission of graphical Data
Description of the format for electronic submission of graphical data related to satellite networks.

SAM
Electronic submission of graphical Data
Description of the format for electronic submission of graphical data related to satellite networks.

SpaceCap
GIBC - Graphical Interface for Batch Calculations
Software package which provides the user with the ability to carry out calculations on satellite networks which allow determining the coordination requirements.

SpaceCom
GIMS - Graphical Interference Management
Software package which allows the capture and modification of graphical data relating to the electronic notification of satellite networks.

SpacePub
SAM - Space Applications Manager
This software provides the user with a unique tool to easily run all installed BR Space Applications software from a global, menu-driven list, rather than searching for and starting applications individually.

SpaceQry
SPS (MSPACEg)
This software provides the user with a unique tool to easily run all installed BR Space Applications software from a global, menu-driven list, rather than searching for and starting applications individually.

SRS
SPS (MSPACEg)
The SPS computer system has been developed to allow determination of the coordination requirements for the Plans for space networks in Appendices 30 and 30a of the Radio Regulations.

SRSCConvert
SPS (MSPACEg)
As of January 2012, the Space Radiocommunications Stations (SRS) on DVD-ROM is replaced by the BR International Frequency Information Circular (BR (FIC) - Space Service. For more information please visit www.itu.int/itu-r/softwar

SMN
Space Network List
The SMN is a group of 20 lists of data concerning planned or existing space stations and earth stations giving information on the use of the frequency spectrum, the occupancy of the geostationary orbit, as well as on non-geostationary orbits.

SpacePub - Space Publication
Software package for printing satellite networks / Earth stations from the SRS database.

SpaceQry - Space Query and Extract System
Software package which provides access to the Radiocommunication Bureau's Space Radiocommunication Stations database.

SpaceRefdb - Space Reference Tables
Software to install an up-to-date copy of the BR Reference tables.

SpaceVal - Space Fillings Validation Software
Software for validating electronic notices captured by the BR SpaceCap software, provides interactive validation facility in SpaceCap.

SRS - Space Radiocommunications Stations on DVD-ROM
As of January 2012, the Space Radiocommunications Stations (SRS) on DVD-ROM is replaced by the BR International Frequency Information Circular (BR (FIC) - Space Service. For more information please visit www.itu.int/itu-r/softwar

www.itu.int/itu-r/software/space
## Space Software Future

<table>
<thead>
<tr>
<th>WRC 12 Instructs the BR to implement a secure paperless electronic approach</th>
<th>Administrations to submit APIs subject to Coordination under Section II of Article 9 to the BR</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Electronic correspondence between administrations and the BR</td>
</tr>
<tr>
<td></td>
<td>Electronic correspondence between administrations</td>
</tr>
<tr>
<td>Radio Communications Advisory Group advises the BR to</td>
<td>Implement a common application framework</td>
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<tr>
<td></td>
<td>Have a centralized database for Space data</td>
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<tr>
<td></td>
<td>Business development continuity plan</td>
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</tbody>
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Space Software Future

**SpaceWisc**
Web interface for Secure communication

**Security** – secure identification of Notifying Administration

**Reliability** - Reliable Submissions of filings and correspondence

**User friendly** - easy to use web interface for submission of API data

**Alert!** – Notifying Administrations will be alerted when document is exchanged
Conclusions

- Use of Space BR: SpaceCap, SpaceVal, SpaceQry, SpacePub, SpaceCom, SNS-on-Line, SNL
- GIMS for Graphical data
- Ensure consistency and integrity of data
- Important to use the validation software
- Updated information and current versions in BR IFIC and ITU web site