



30TH WORLD RADIOCOMMUNICATION SEMINAR

24 – 28 October 2022

Geneva, Switzerland

BR Space Software and Databases

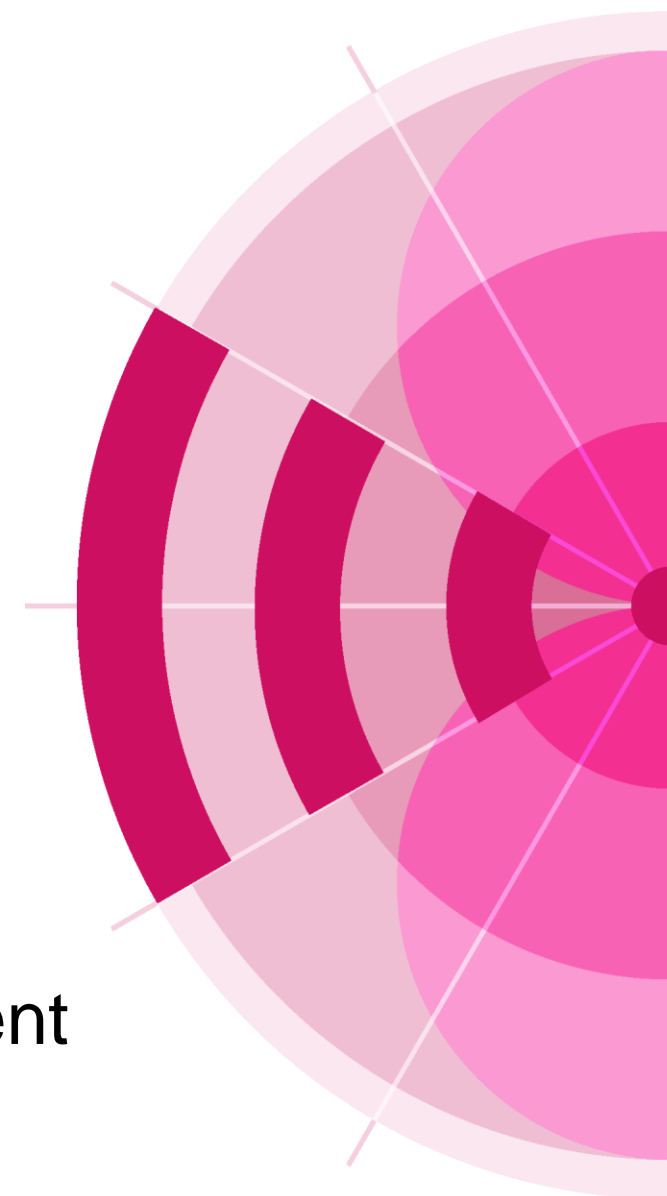
Miroslav Ćosić

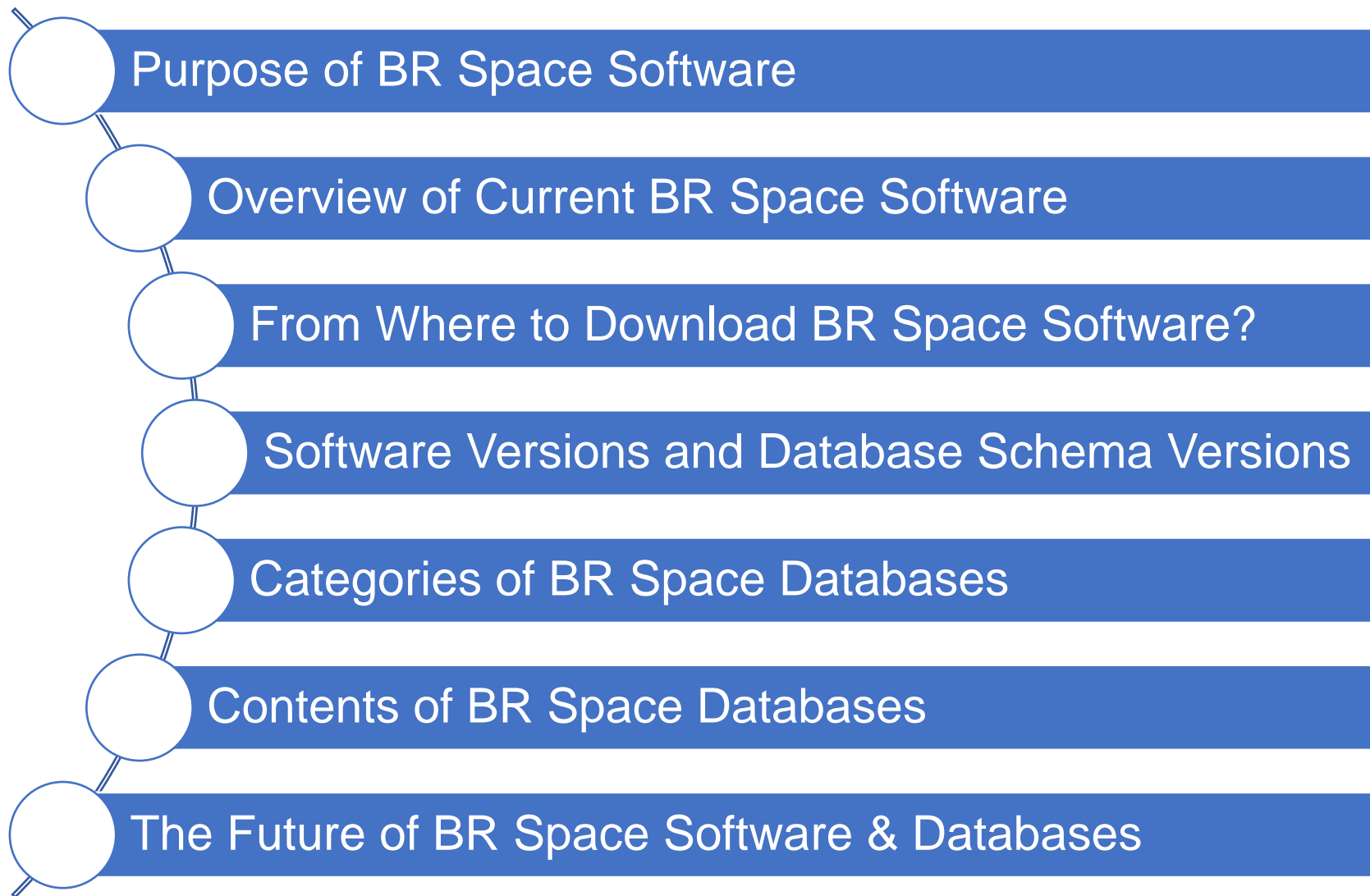
Space Applications Software Division

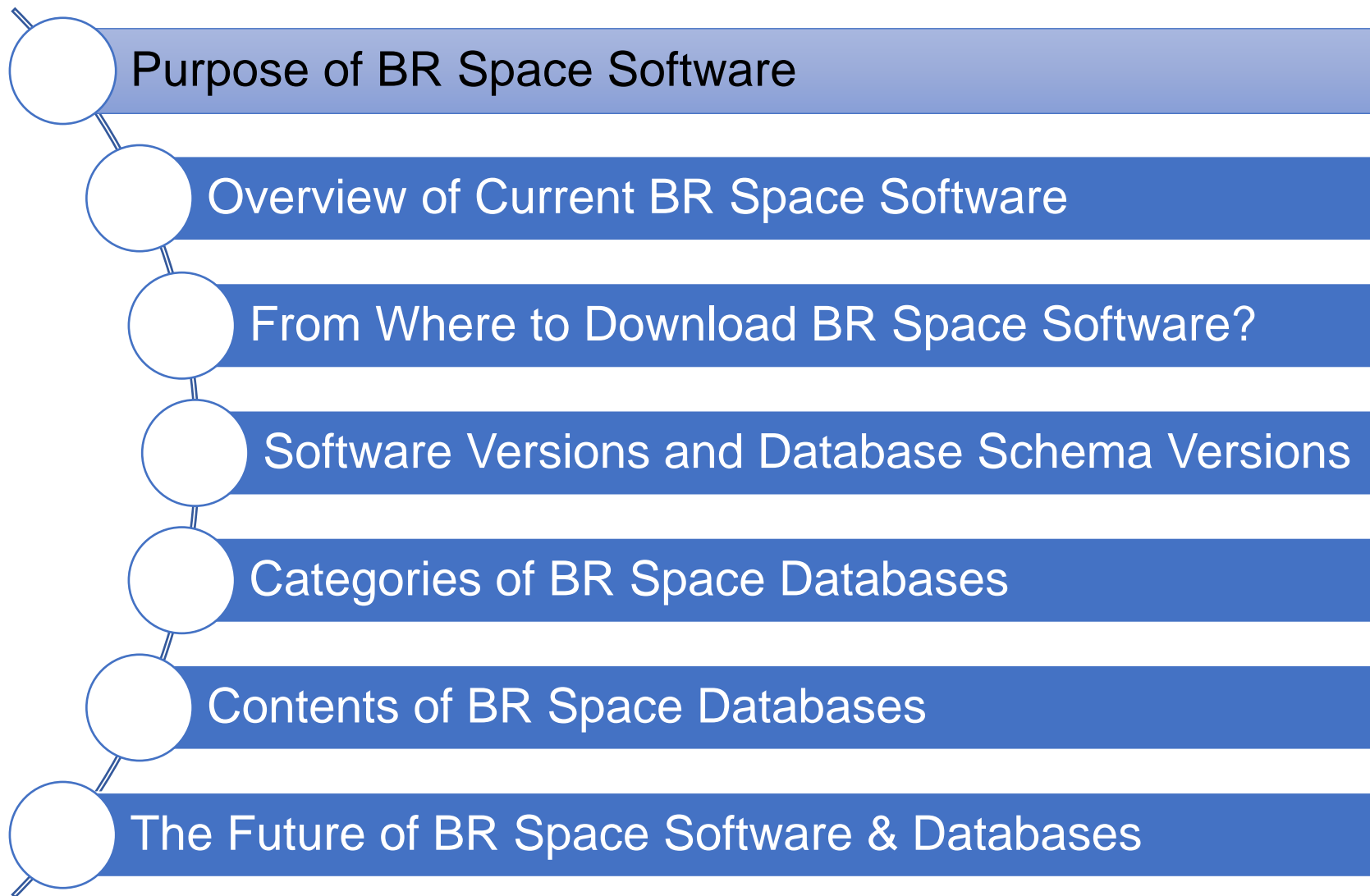
Informatics, Administration and Publications Department

www.itu.int/go/wrs-22

#ITUWRS







Purpose of BR Space Software

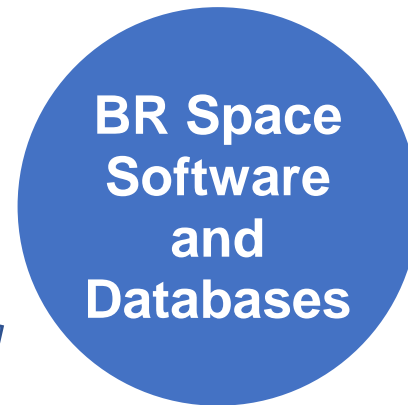
Radio Regulations (RR)

Incorporate the decisions of the World Radiocommunication Conference



Rules of Procedure

Complement the RR by providing clarification of the application of specific RR provisions and processes/exams



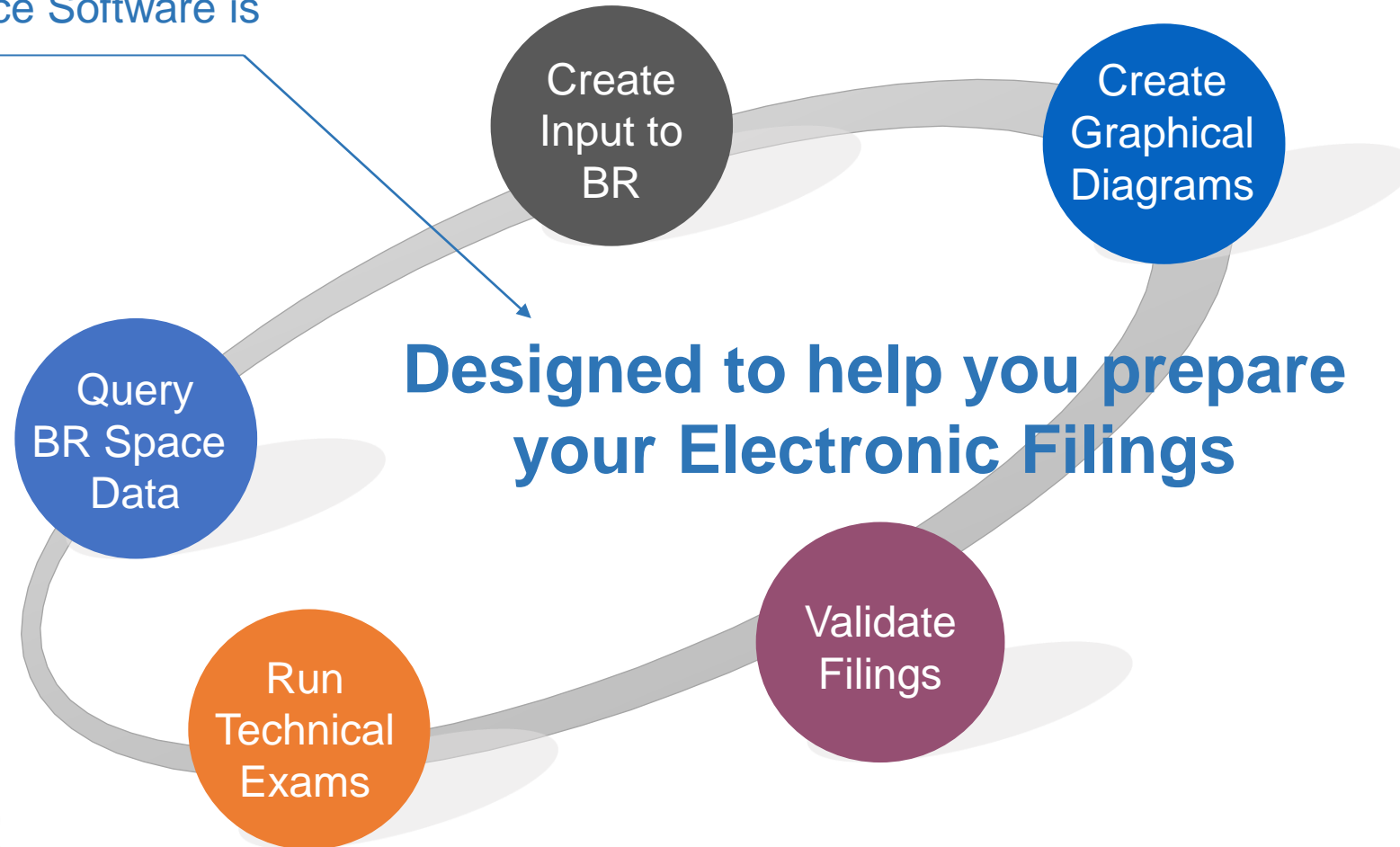
Streamline the Implementation of the RR and Rules of Procedure

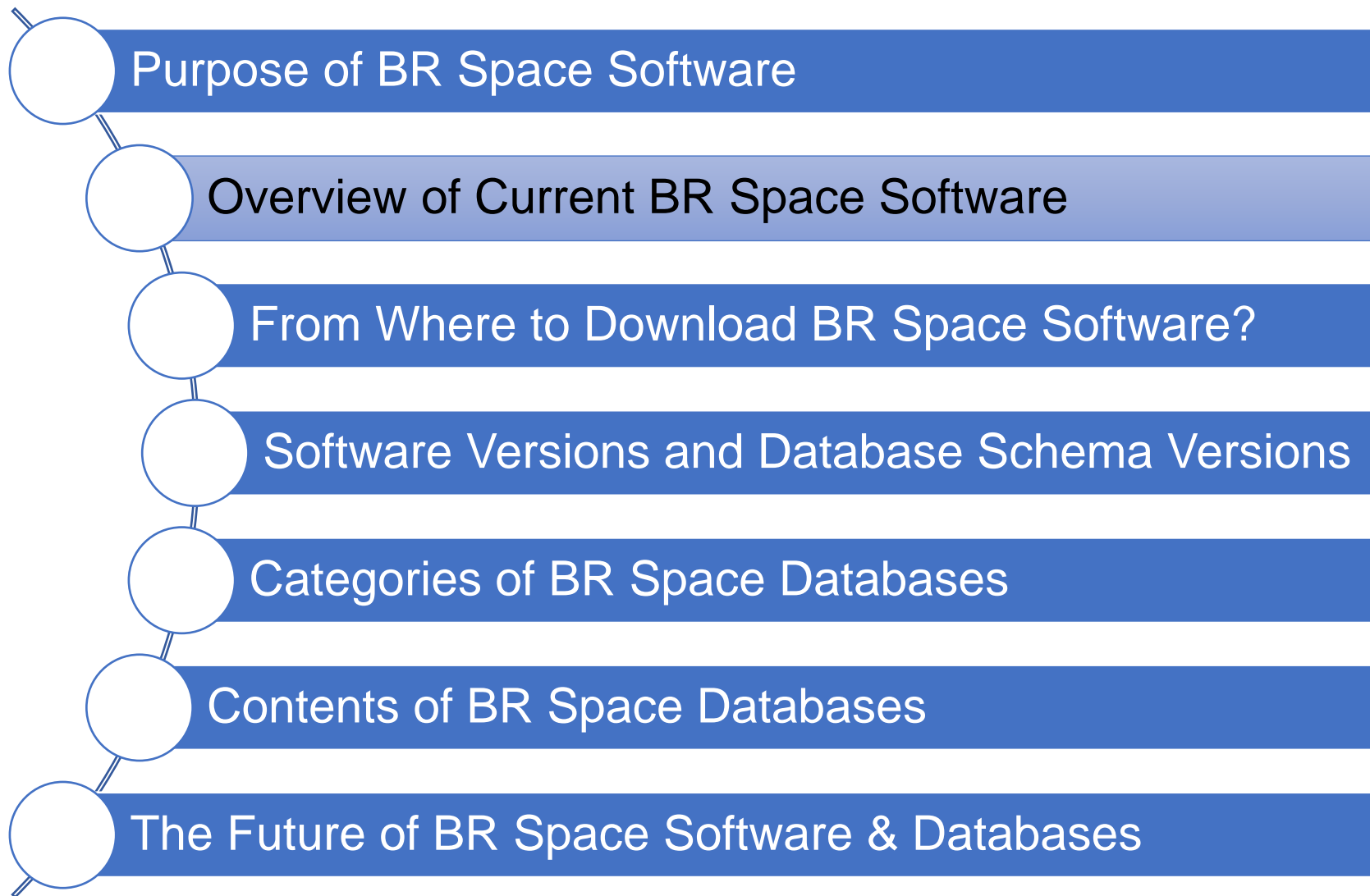
Help you prepare electronic filings compliant with the RR

Process the electronic filings submitted to the BR

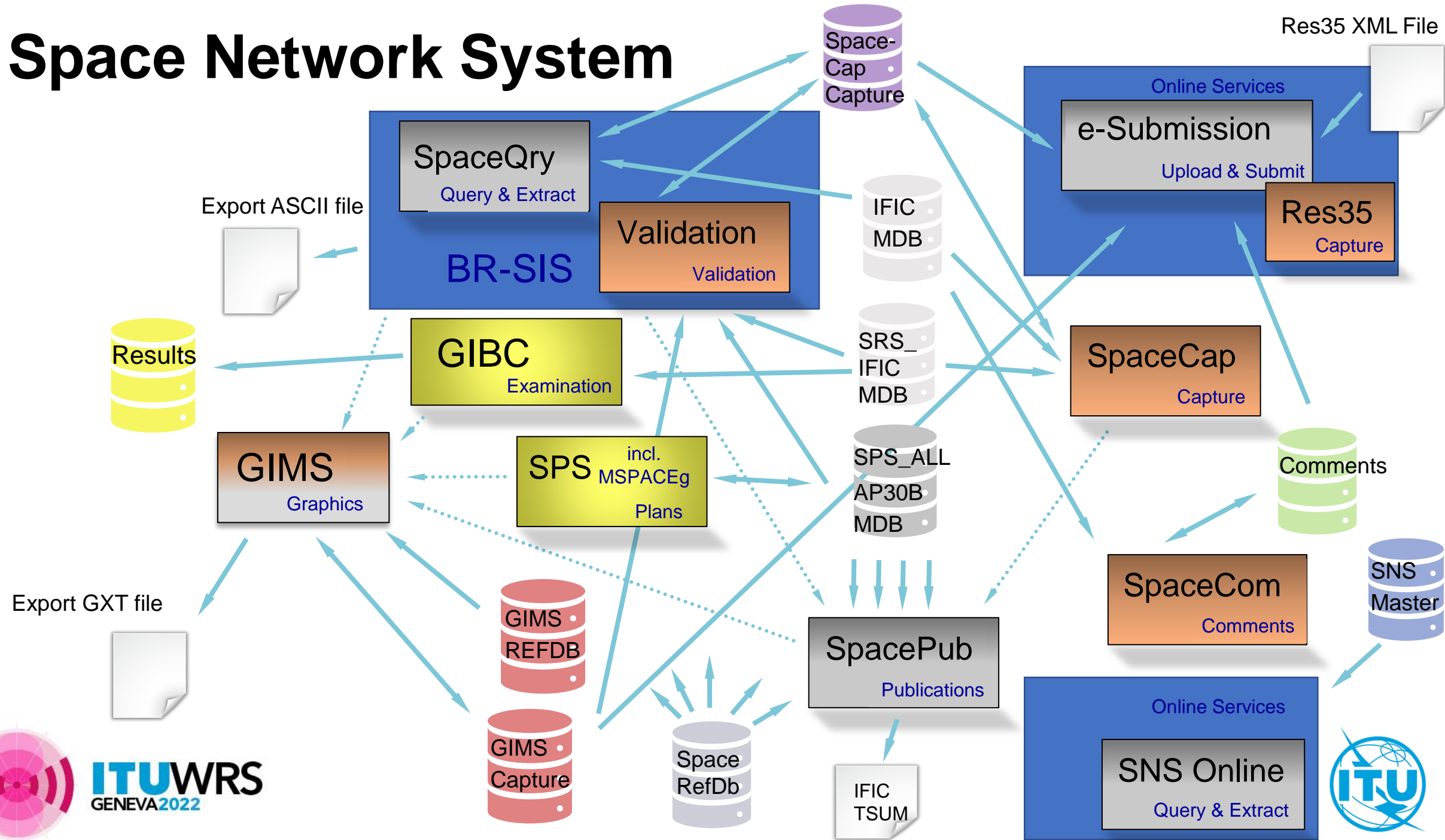
Purpose of BR Space Software

BR Space Software is

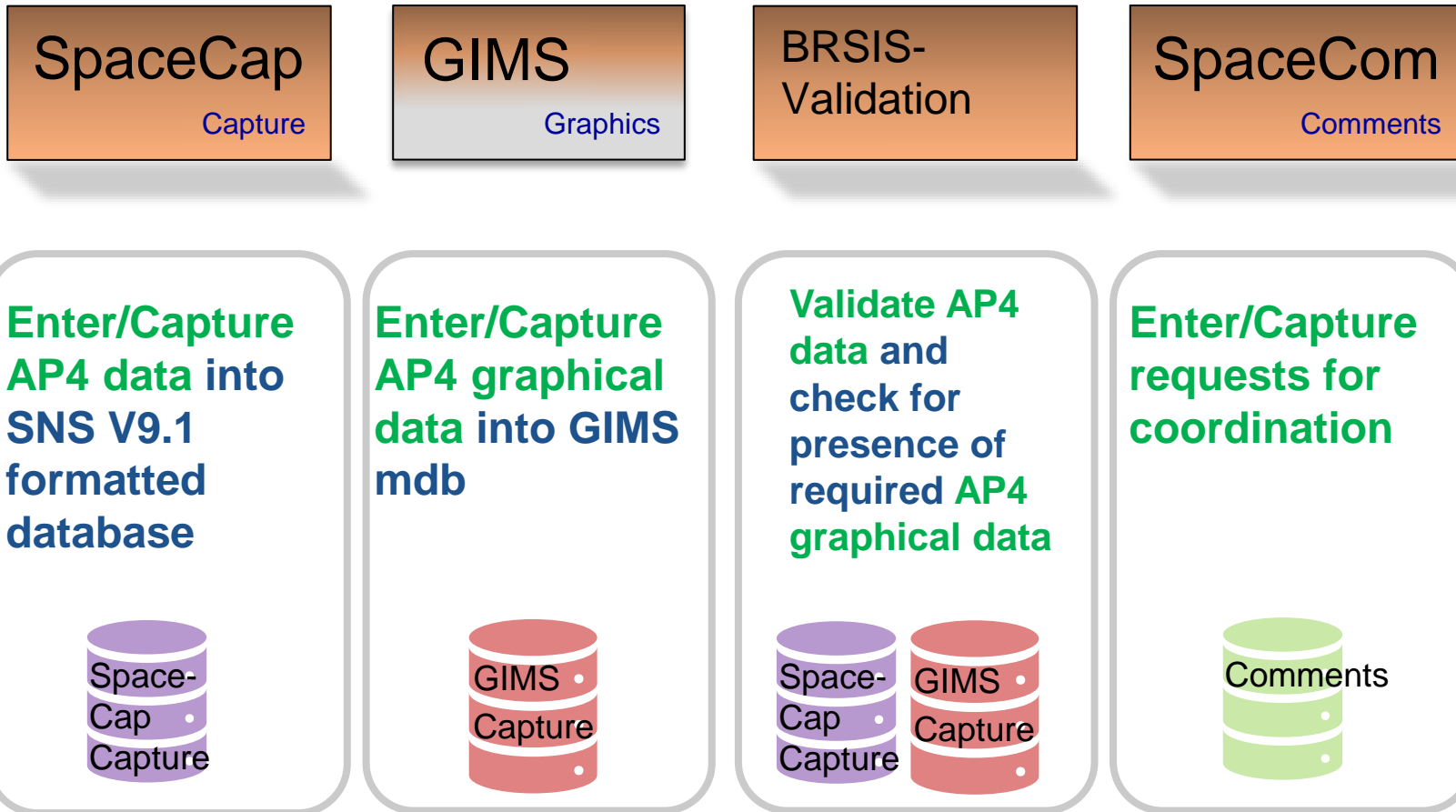




Space Network System



Space Services Data Entry Software



Space Services Data Query Software

BRSIS-
SpaceQry

SNS Online
Query & Extract

SpacePub
Publications

GIMS
Graphics

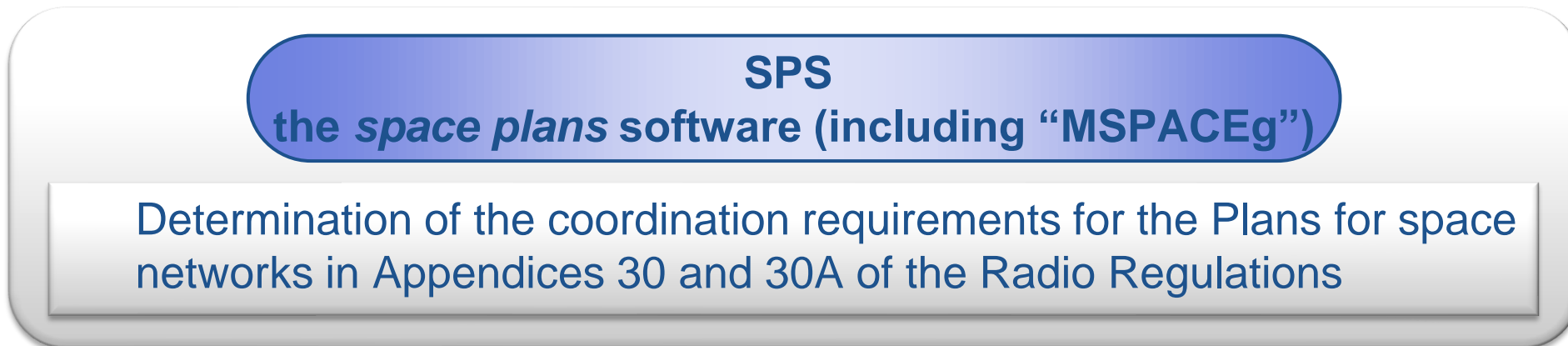
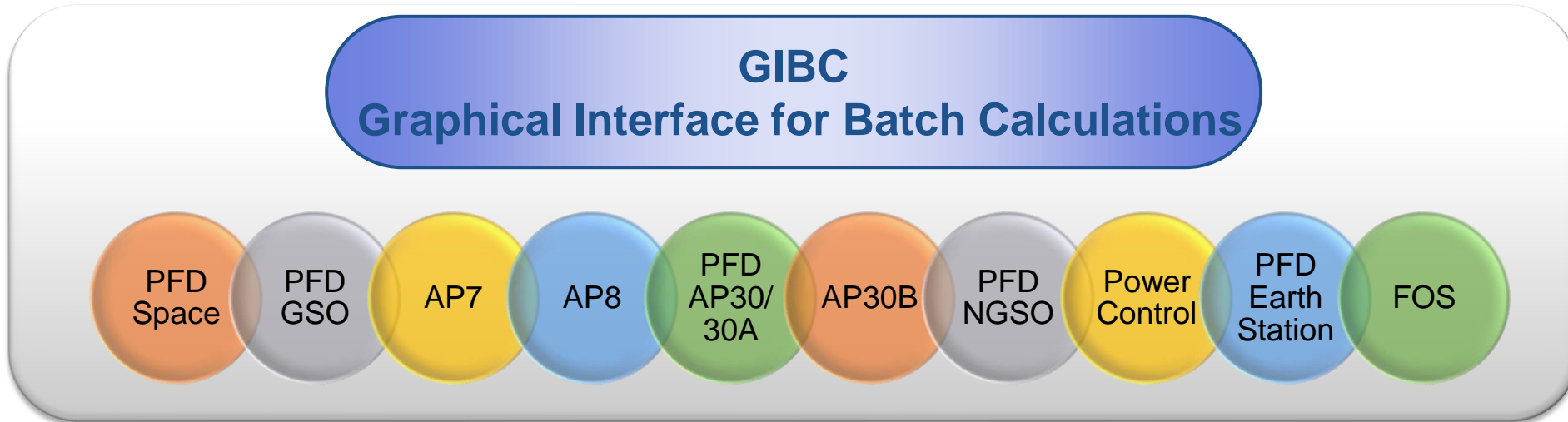
Query
satellite and
Earth stations
in the space
services from
SNS format MDB
containers

Query
satellite and
Earth stations
in the space
services from a
read-only copy of
the SNS master
database in ITU

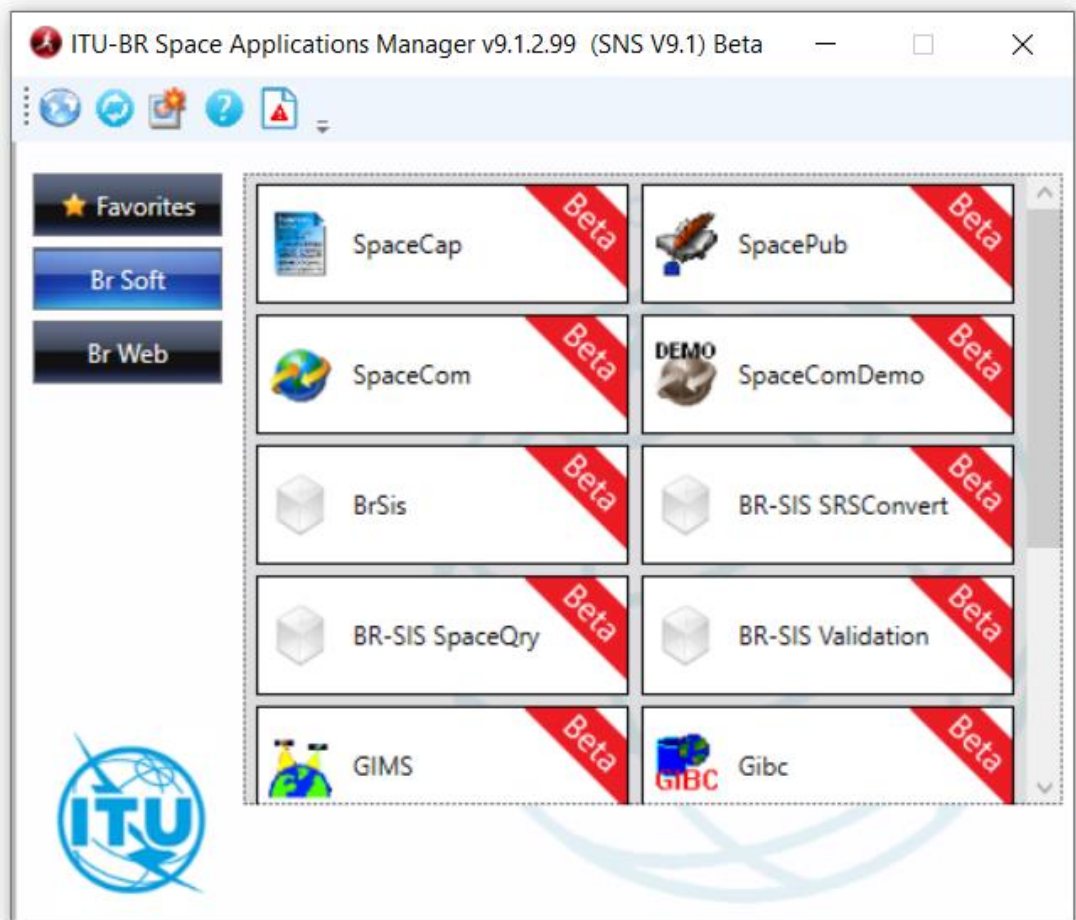
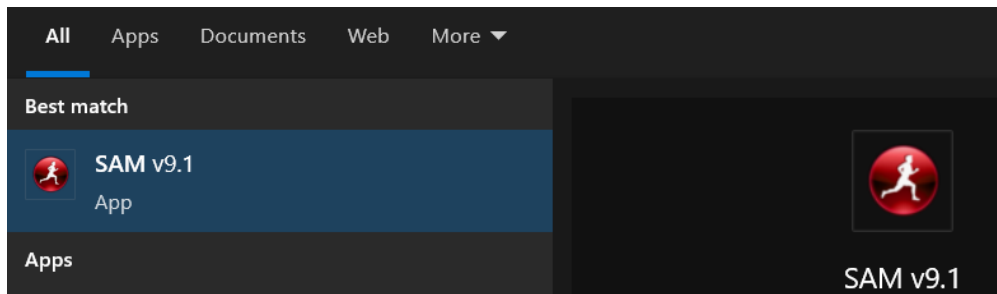
Print
satellite and
Earth stations
in the space
services from
SNS format MDB
containers

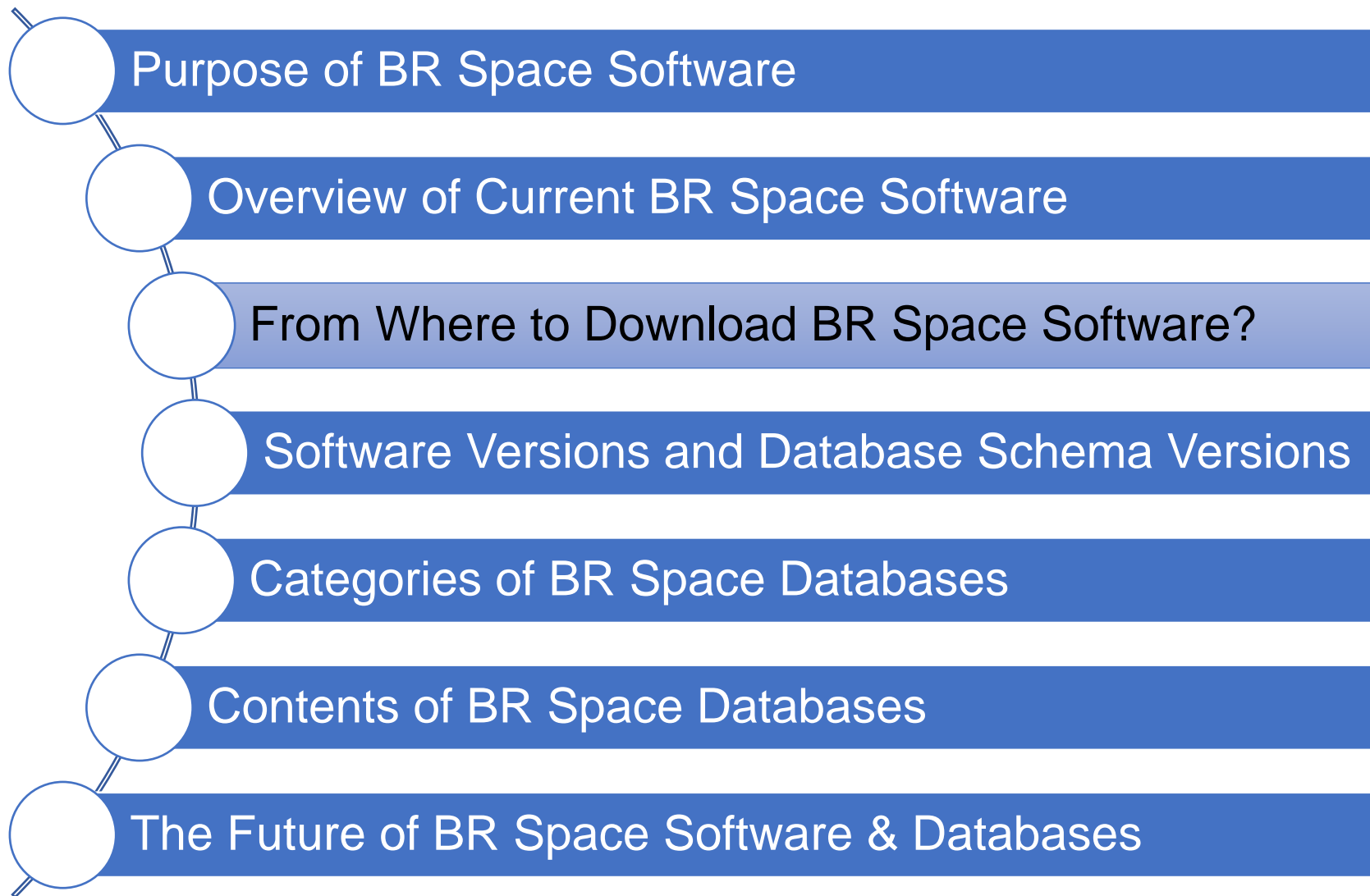
Query
graphical data in
the GIMS
database

Space Services Technical Exams Software



Space Application Manager





Latest BR Space Software Version



Download from the BR web site

<https://www.itu.int/ITU-R/go/space-software/en>

or



Install from DVD/ISO folder **BR_Soft**

- **Installation requires administrator privileges**
- **Your network administrator may need to whitelist some legacy software components**

More details: BR_Soft\Notes on installing ITU BR Space Applications V9.pdf

BR Space Software Version for WRS-22

Timetable and Materials for WRS-22 Space Workshop (25-28 October 2022)

Programme

SNS 9.1 software

Videos

SNS 9.1 software (beta version for testing only)

This set of software will be used during the World Radiocommunication Seminar (24-28 October 2022).

The BR Software package (BRsoft 9.1), compatible with the restructured Space Network System database version 9.1 (SNS 9.1) (of which a beta version for testing only will be released on IFIC 2982) fully reflects all the modifications and additions made by WRC-19 to Appendix 4.

It is available for download [here \(Release notes\)](#). ([Notes on installing](#))

To install the applications, please execute the installer you have just downloaded.

Select the applications you want to install (for the WRS we recommend you install all), click button "NEXT" and follow instructions if any.

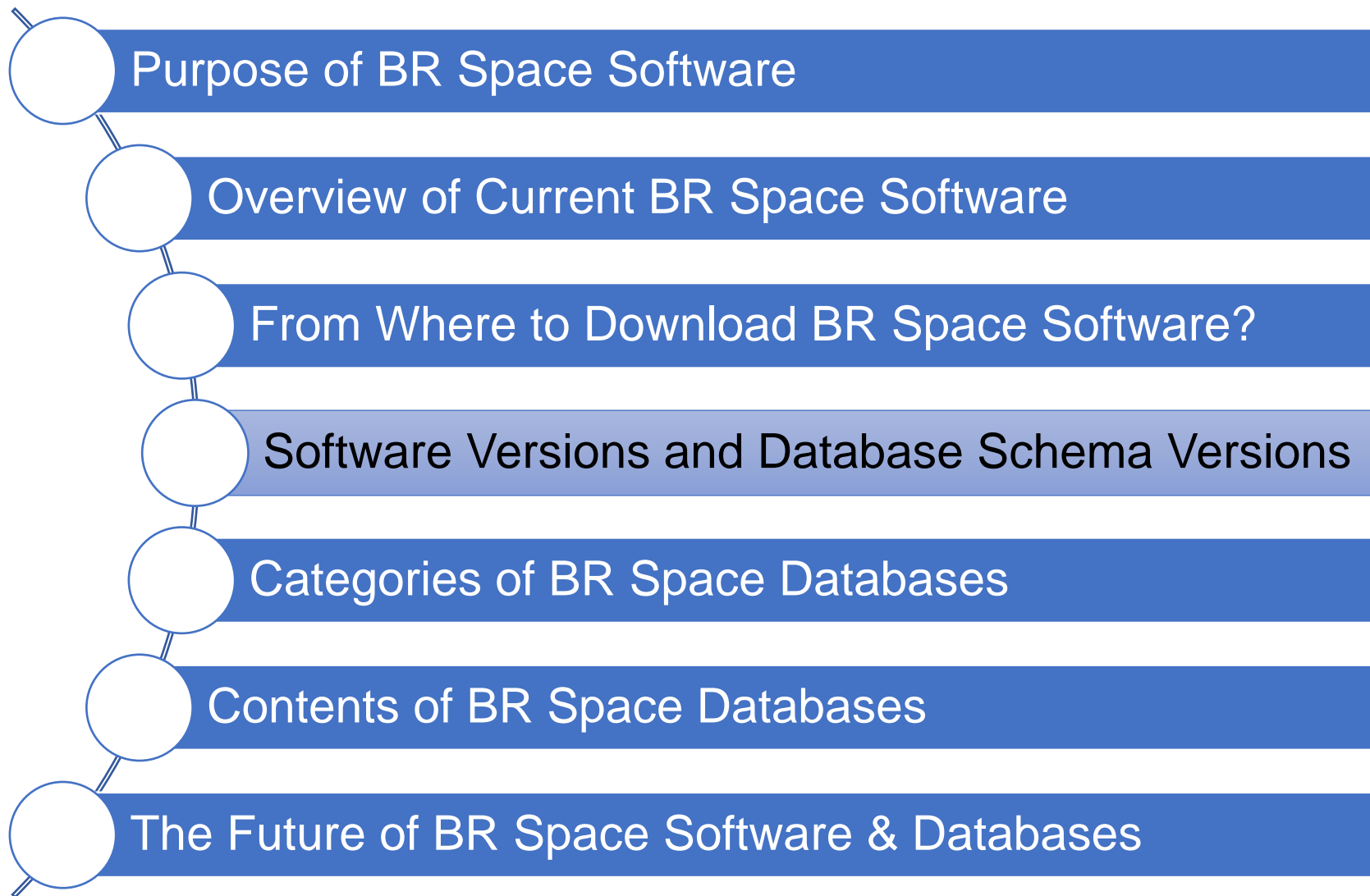
Note: V9 and V9.1 software can be used in parallel without affecting each other.

Do not hesitate to contact us in advance, if you have trouble during the installation at brsas@itu.int

- **Installation requires administrator privileges**
- **Your network administrator may need to whitelist some legacy software components**

More details: [https://www.itu.int/en/ITU-R/space/WRS22space/Notes on installing ITU BR Space Applications - V9.1.pdf](https://www.itu.int/en/ITU-R/space/WRS22space/Notes%20on%20installing%20ITU%20BR%20Space%20Applications%20-%20V9.1.pdf)



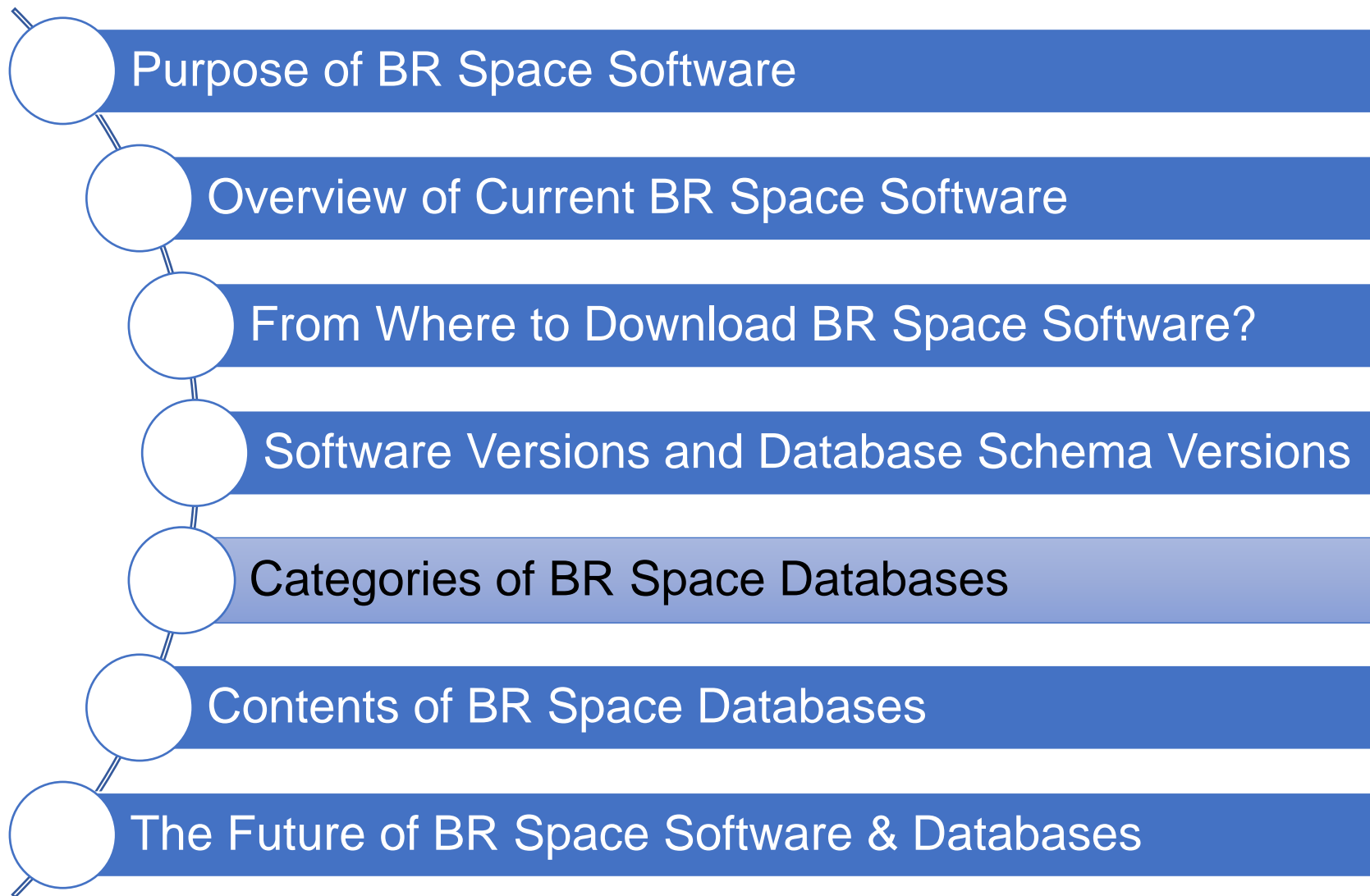


BR Space Software and DB Schema Version

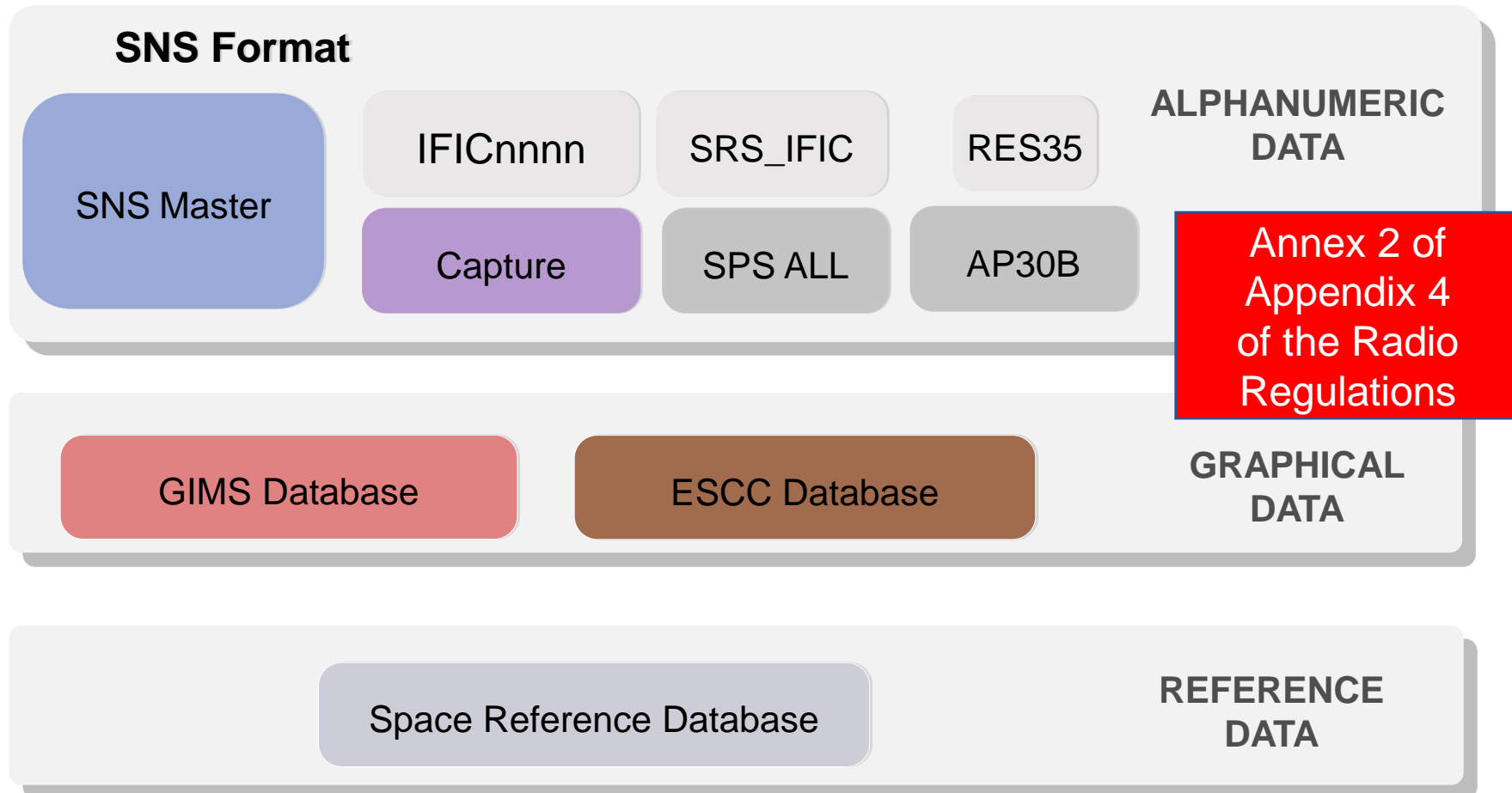
- Each World Radio Communication Conference introduces new resolutions and changes to the Radio Regulations
 - **Decisions taken at WRC-19 (first phase of implementation and database schema change): v9 (IFIC 2926 - August 2020)** (e.g. support for NGSO constellations) - Impact on all desktop and web applications
 - **Work continued on implementing WRC-19 decisions** and adding new features to v9 software throughout the mid-2020 to mid-2022 period (RES35, coordination agreements capture, FOS, etc.)
 - **Second WRC-19-related database schema change: v9.1 (IFIC 2985 – November 2022)** – Multiple configurations identifiers for Non-GSO, excluding geographic areas from service area, etc.
- Transitions are announced in Circular Letters
 - **CR/464 for v9, CR/XXX for v9.1**
- Where to find information on the SNS Format (DB schema)?
 - **Section III of the Space Preface:** Description of the SNS format

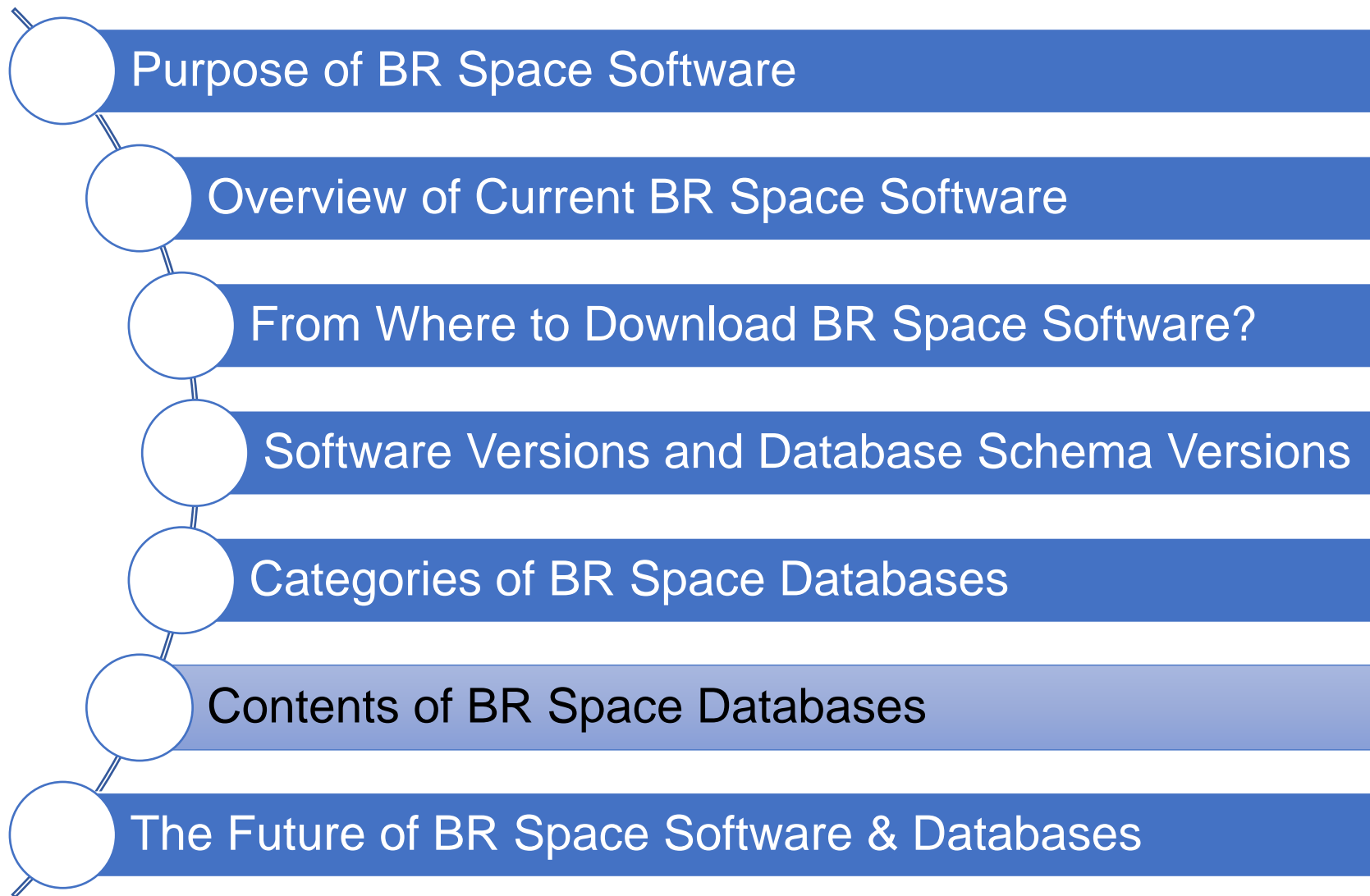
Database Schema Changes for v9.1

- Files in the **Databases_v9.1_beta\SRS_Data** folder of IFIC 2982 DVD (or ISO image):
 - **sns_dbv91.pdf** : Extract of the Preface to the BR IFIC (to be official as of IFIC 2985)
 - **SNS_V9_1_Changes.pdf** : List of differences with respect to the v9 schema
 - **SRS Diagram V9.1 Beta.pdf** : Database diagram (draft – in terms of cosmetic appearance)

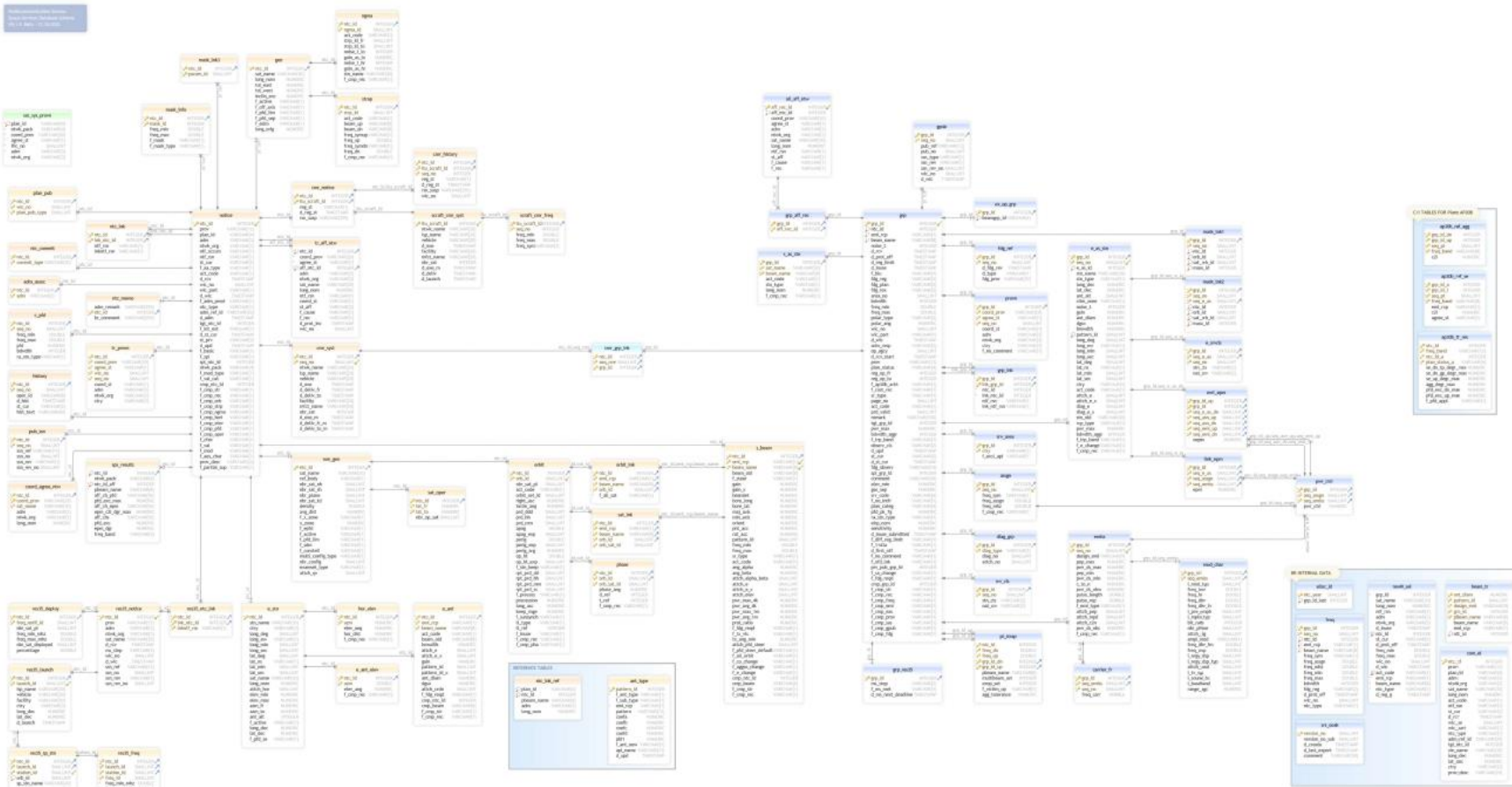


Categories of BR Space Databases





BR SNS Format Databases



SNS Format Database



SNS Master Database

SRS_IFICnnnn.mdb

IFICnnnn.mdb

srs_res35.mdb

SPS_ALL_IFICnnnn.mdb

AP30Bnnnn.mdb

Capture.mdb



nnnn is the IFIC publication number, such as 2982 (published 18 Oct 2022)

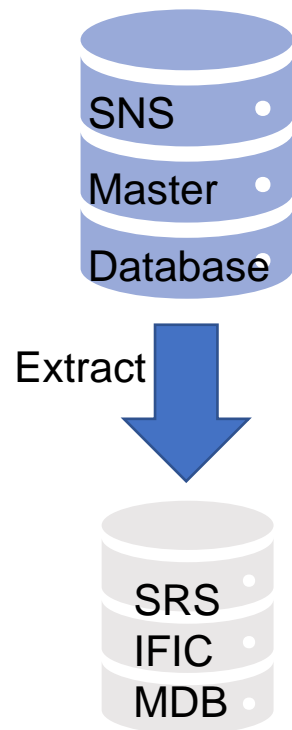


SNS Master Database



- **In the Master Register**
 - **Coordination and Notification**
 - **Advance Publication of Information**
 - **Due Diligence (Resolution 49)**
- **Electronic Filings received by the BR**
 - **New assignments**
 - **Mod(ification) of existing**
 - **Delete (suppress) existing**
- **Notifications in Technical Examination**

SRS_IFICnnnnn.mdb on the BR IFIC (Space) DVD/ISO Image



- Published every IFIC DVD (2 weeks)
- Snapshot of the SNS Master Database

- Coordination and Notification recorded in the **Master Register**
- in **Technical Examination**
- for **Advance Publication of Information**
- for **Due Diligence (Resolution 49)**

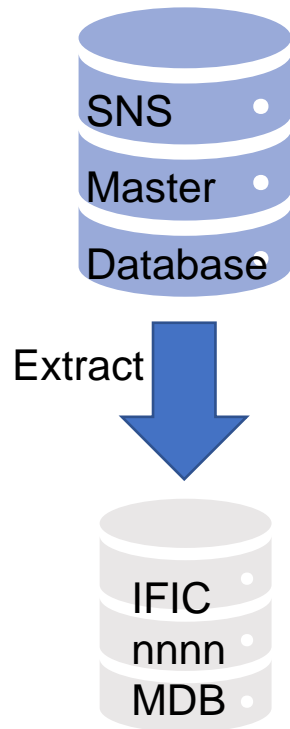
Space Radiocommunication Stations (SRS)



ITUWRS
GENEVA2022

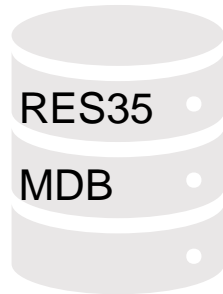


IFICnnnn.mdb on the BR IFIC (Space) DVD/ISO Image



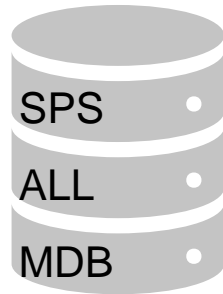
- **Published every IFIC DVD (2 weeks)**
 - **Part I-S** – New frequencies or modifications, cancellations of assignments in the Master Register received by the BR
 - **Part II-S** – Updates to the Master Register with Findings
 - **Part III-S** – Notifications returned to ADM with unfavourable findings
 - **Special Sections** – Submissions published: API/A, CR/C, CR/D, CR/E, CR/F

Resolution 35 Database on the BR IFIC (Space) DVD/ISO Image



- Published every IFIC DVD (2 weeks)
- Satellite system information
- Launch information
- Space station characteristics
- Frequency characteristics
- Deployment summary

SPS_ALL_IFICnnnn.mdb on the BR IFIC (Space) DVD/ISO Image



Space Plan System (SPS)

- **Published every IFIC DVD (2 weeks)**

Technical characteristics and reference situation for networks of the planned space services

- **Appendices 30/30A**

- Region 1 and 3 Plan, List and pending Article 4 networks
- RARC SAT-R2 Region 2 Plan
- Article 5 of Appendices 30 and 30A
- Pending Article 2A networks of Appendices 30 and 30A

- **Due Diligence (Resolution 49)**

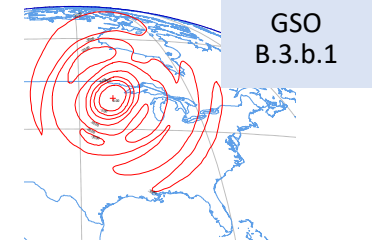
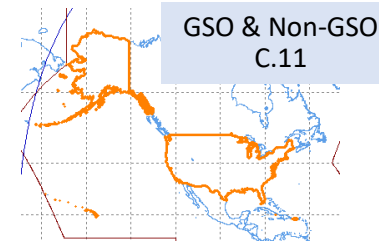
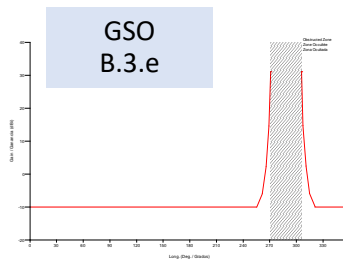
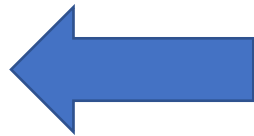
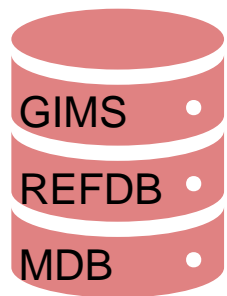
Appendix 30B Database on the BR IFIC (Space) DVD/ISO Image



- Published every IFIC DVD (2 weeks)
- **Appendix 30B**
 - Plan, List and Pending Article 6 networks
 - Article 8 of Appendix 30B
- **Due Diligence (Resolution 49)**

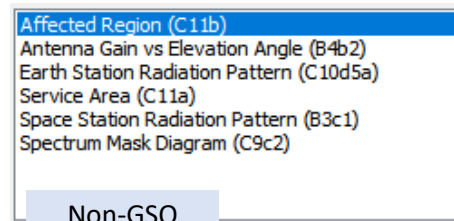
Graphical Data - GIMS Database on the BR IFIC (Space) DVD/ISO Image

- Published every IFIC DVD (2 weeks)

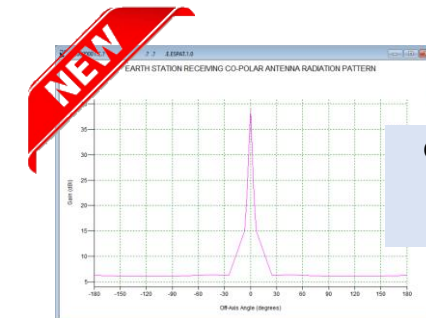


Graphical Data for GSO and Non-GSO Satellites

- used by Technical Examination software
- Available in GIMS_Data\grefdbnnnn.mdb and accessible via GIMS software (REFDB)



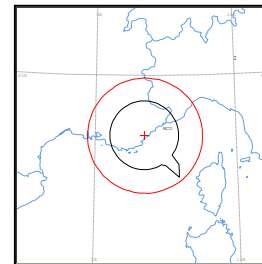
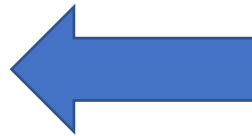
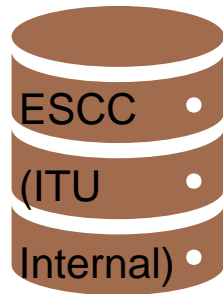
Non-GSO
as pictures



GSO & Non-GSO
C.10.d.5.a
B.3.c.1

Graphical Data - ESCC Database

- Master Repository for Earth Station Coordination Contours



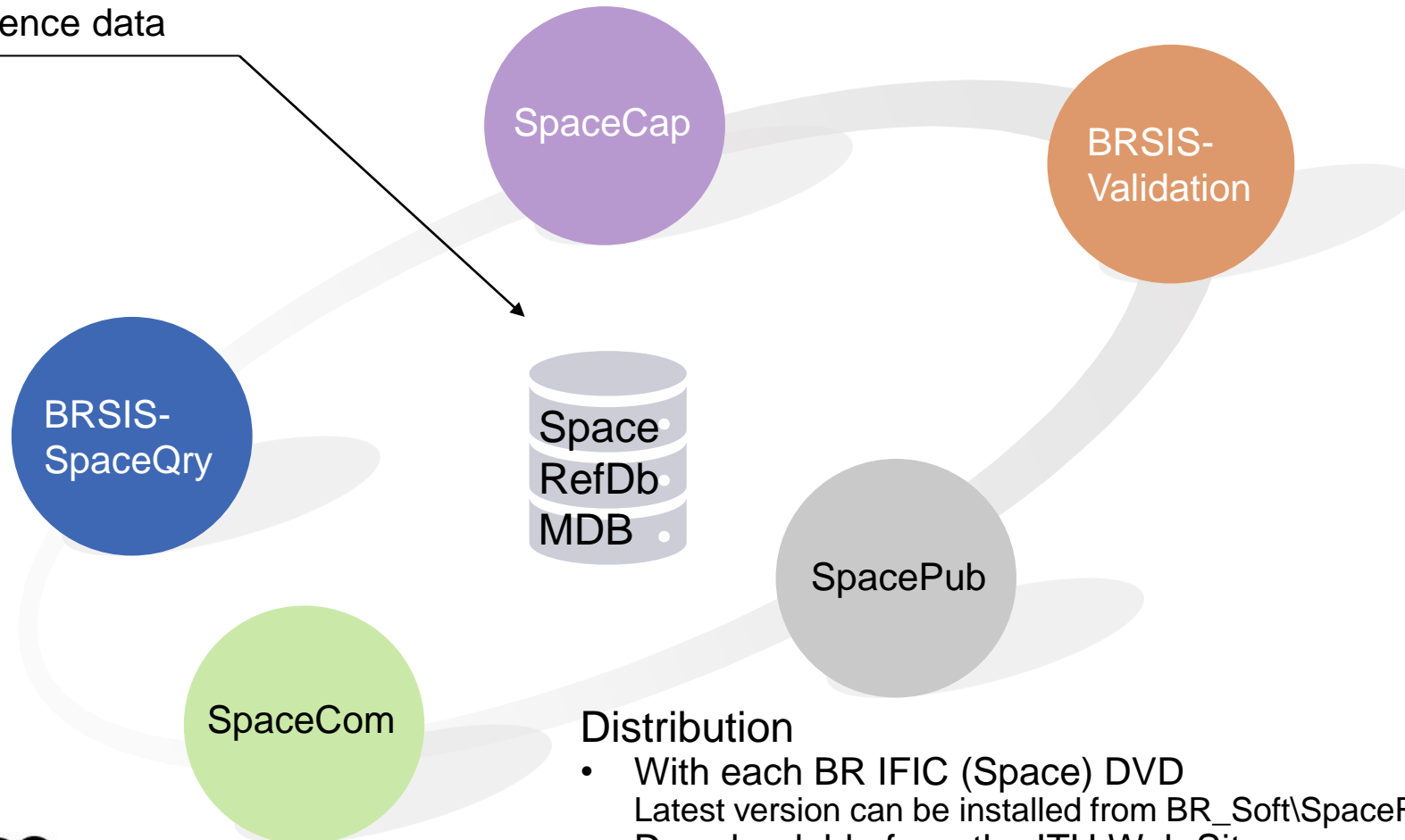
Generated by the Appendix 7 software

Graphical Data for Earth Stations

- used in-house
- used by Technical Examination software

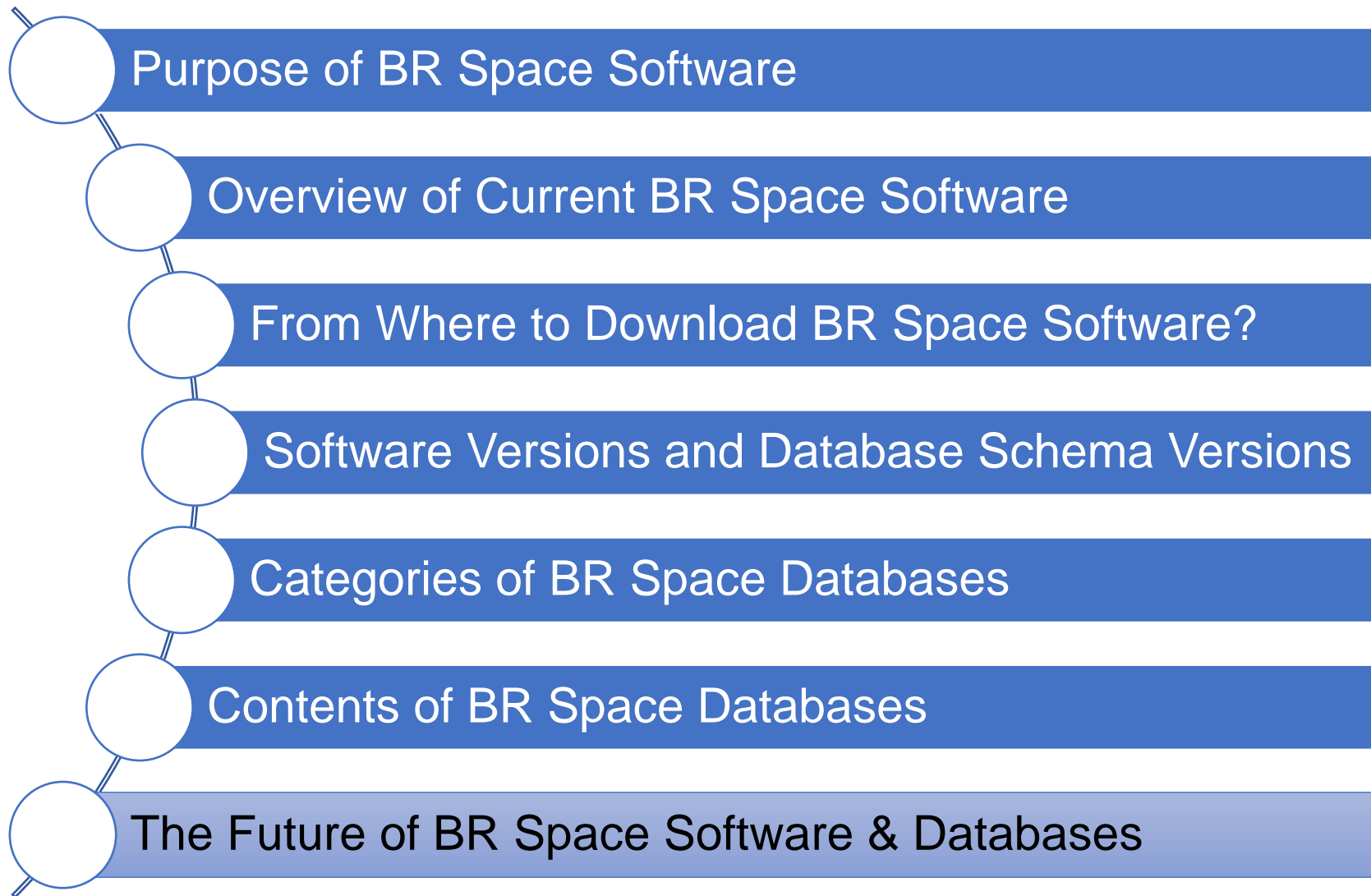
Space Reference Database

Ensures all BR Space Software use the same reference data

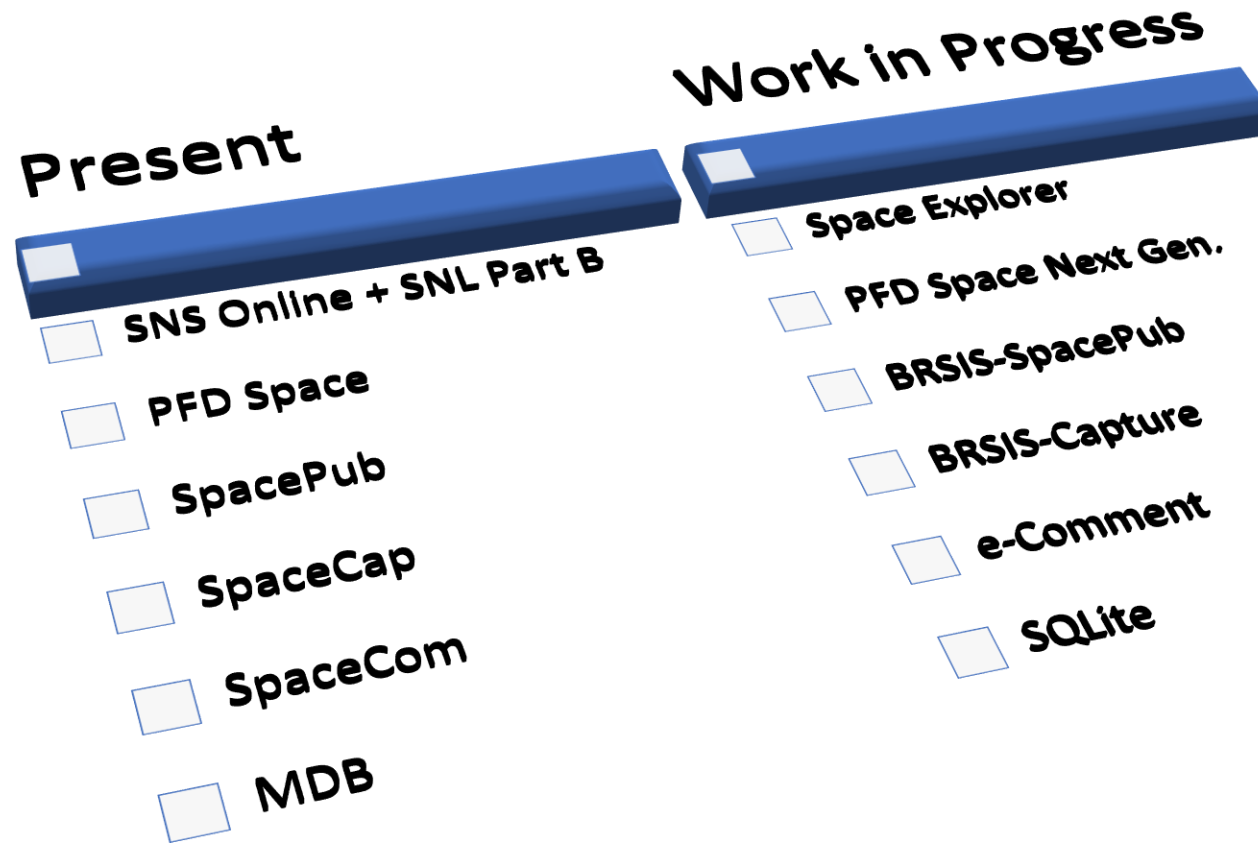


Distribution

- With each BR IFIC (Space) DVD
- Latest version can be installed from BR_Soft\SpaceRefDB folder
- Downloadable from the ITU Web Site
<https://www.itu.int/en/ITU-R/software/Pages/spacerefdb.aspx>



Future of BR Space Software



Thank you!

ITU – Radiocommunication Bureau

Questions to brsas@itu.int

