# Development of the ITU-R documents database search facility

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# Overview

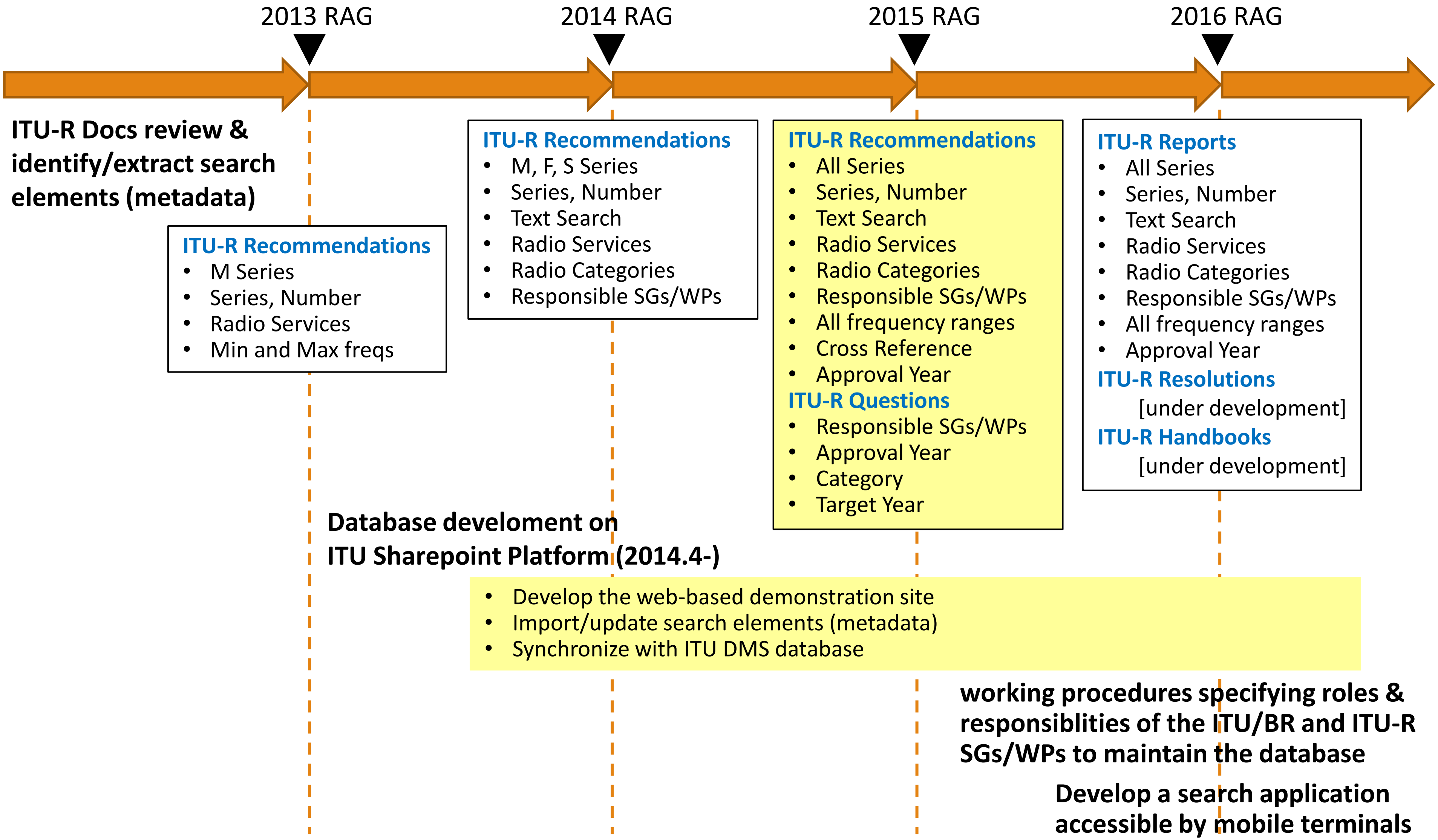
- RAG (2012) invited the Director to develop a search database facility for ITU-R Recommendations for assisting membership to identify ITU-R Recommendations.

- Voluntary Contribution USD 290,000 kindly provided by the Ministry of Internal Affairs and Communications (MIC), Japan in April 2014
  - Expedite the database development
  - Expand this search function to ITU-R Questions, Reports, Handbooks, Resolutions
  - Make it more accessible for ITU members, including developing countries
  - Consider the equipment of functions to make it more effective and useful

Main Activities

1. ITU-R Documents review & identify/extract search elements
2. Database develoment on ITU Sharepoint Platform
3. Document the working procedures specifying roles & responsiblities of the ITU/BR and ITU-R SGs/WPs to maintain the database
4. Develop a search application accessible by mobile terminals

# Current Progress



2013 RAG

2014 RAG

2015 RAG

2016 RAG

**ITU-R Docs review & identify/extract search elements (metadata)**

**ITU-R Recommendations**
- M Series
- Series, Number
- Radio Services
- Min and Max freqs

**ITU-R Recommendations**
- M, F, S Series
- Series, Number
- Text Search
- Radio Services
- Radio Categories
- Responsible SGs/WPs

**ITU-R Recommendations**
- All Series
- Series, Number
- Text Search
- Radio Services
- Radio Categories
- Responsible SGs/WPs
- All frequency ranges
- Cross Reference
- Approval Year

**ITU-R Questions**
- Responsible SGs/WPs
- Approval Year
- Category
- Target Year

**ITU-R Reports**
- All Series
- Series, Number
- Text Search
- Radio Services
- Radio Categories
- Responsible SGs/WPs
- All frequency ranges
- Approval Year

**ITU-R Resolutions**

[under development]

**ITU-R Handbooks**

[under development]

**Database develoment on ITU Sharepoint Platform (2014.4-)**

- Develop the web-based demonstration site
- Import/update search elements (metadata)
- Synchronize with ITU DMS database

**working procedures specifying roles & responsiblities of the ITU/BR and ITU-R SGs/WPs to maintain the database**

**Develop a search application accessible by mobile terminals**

# ITU-R Documents Search Database Facility Web Site

- ☐ **ITU-R Documents Search Database Facility Web Site URL**
  https://extranet.itu.int/brdocsearch/

- ☐ **Link to the Search Database Facility is placed to the following pages:**
  - ✓ ITU-R Study Groups, Working Parties and CCV pages
  - ✓ RAG page
  - ✓ RA-15 page

  ("ITU-R Documents Search Tool" in **Documentation** part)

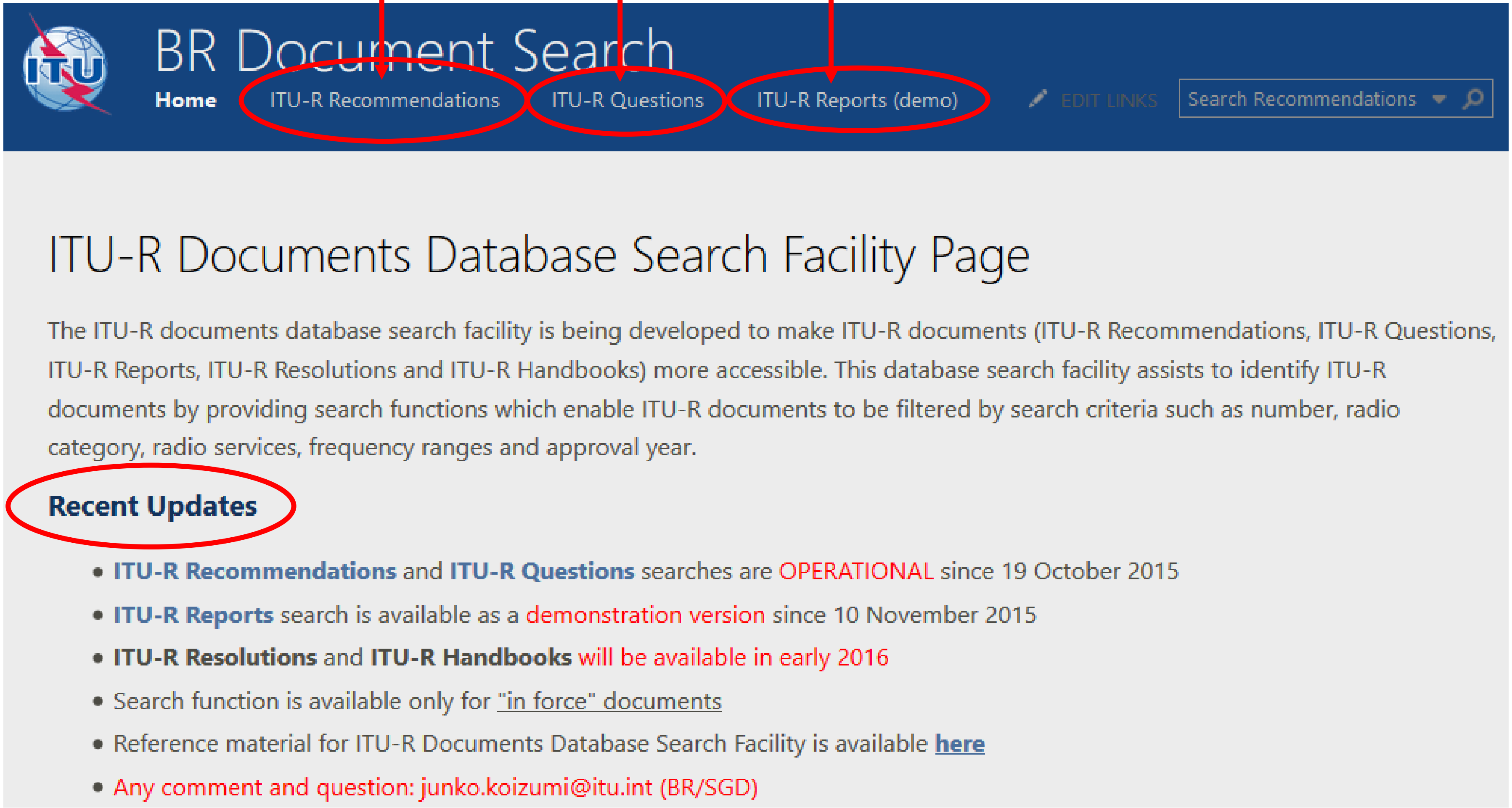
# ITU-R Documents Database Search Facility Top Page

https://extranet.itu.int/brdocsearch

Link to ITU-R Recommendations search page

Link to ITU-R Questions search page

Link to ITU-R Reports search page



## ITU-R Documents Database Search Facility Page

The ITU-R documents database search facility is being developed to make ITU-R documents (ITU-R Recommendations, ITU-R Questions, ITU-R Reports, ITU-R Resolutions and ITU-R Handbooks) more accessible. This database search facility assists to identify ITU-R documents by providing search functions which enable ITU-R documents to be filtered by search criteria such as number, radio category, radio services, frequency ranges and approval year.

### Recent Updates

- **ITU-R Recommendations** and **ITU-R Questions** searches are OPERATIONAL since 19 October 2015
- **ITU-R Reports** search is available as a demonstration version since 10 November 2015
- **ITU-R Resolutions** and **ITU-R Handbooks** will be available in early 2016
- Search function is available only for "in force" documents
- Reference material for ITU-R Documents Database Search Facility is available **here**
- Any comment and question: junko.koizumi@itu.int (BR/SGD)

# Target documents and main search elements

- ❑ **ITU-R Recommendations**
  - ❖ Metadata Search (Search Criteria)
    "ITU-R Recommendation Series", "Radio Category", "Radio Services", "Cross Reference", "Responsible SGs/WPs" and "Approval Year"
  - ❖ Frequency Search
    Search by frequency range (min and max frequencies)

- ❑ **ITU-R Questions**
  - ❖ Metadata Search (Search Criteria)
    "Responsible SGs/WPs", "Approval Year", "Target Year" and "Category" (Resolution ITU-R 5)

- ❑ **ITU-R Reports [demo version, data verification is required]**
  - ❖ Metadata Search (Search Criteria)
    "ITU-R Recommendation Series", "Radio Category", "Radio Services", "Responsible SGs/WPs" and "Approval Year"
  - ❖ Frequency Search
    Search by frequency range (min and max frequencies)

- ❑ **ITU-R Resolutions and ITU Handbooks [under development]**

# newly introduced search criteria

❑ **Radio Category (for ITU-R Recommendations and ITU-R Reports)**

Classified into the following 8 categories according to subject.

1. Technical/operational characteristics or parameters
2. Sharing/compatibility issues
3. Frequency arrangements
4. Error performance/availablility objectives
5. High Frequency (HF) systems
6. Antenna reference patterns
7. Vocabulary
8. IMT

(Each ITU-R Recommendation can have multiple categories, or without category.)

❑ **Cross Reference (for ITU-R Recommendations)**

The location where the Recommendations are referred to in the RR is searchable.

"IBR" : «incorporated by reference» (IBR) in the Radio Regulations
"Ref." : referred to in the Radio Regulations, but not IBR
blank : not referred to in the Radio Regulations

❑ **Frequency Search (for ITU-R Recommendations and ITU-R Reports)**

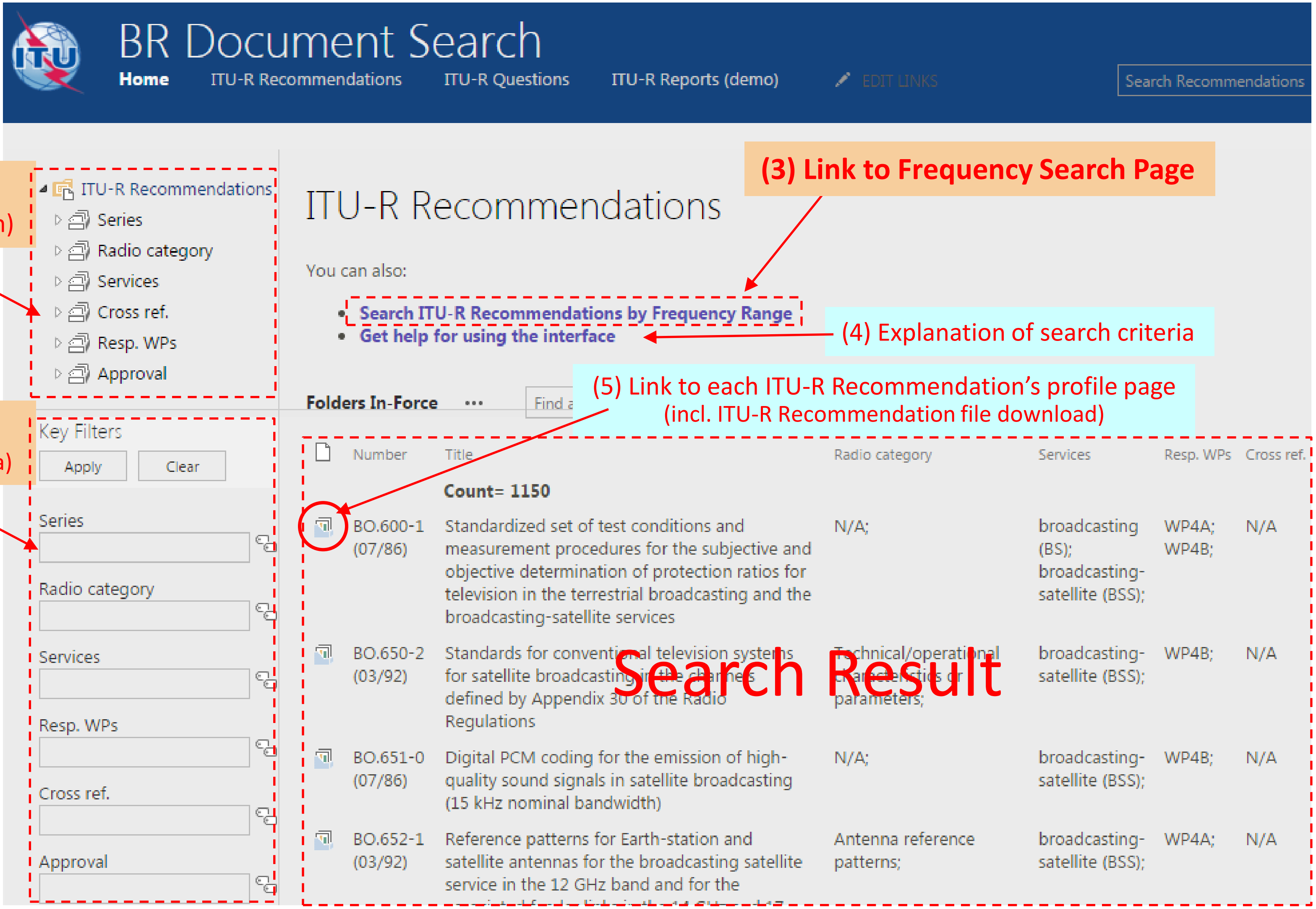
Frequency Search by frequency range (with min and max frequencies) is available.
(This function is provided in the separate page from main search page.)

# Demonstration of ITU-R Documents Search Database Facility

by ITU-R Recommendation search page
(ITU-R Recommendation Page covers all functions)

# ITU-R Recommendations Search

https://extranet.itu.int/brdocsearch/R-REC/



BR Document Search

Home
ITU-R Recommendations
ITU-R Questions
ITU-R Reports (demo)
EDIT LINKS
Search Recommendations

**(1) Metadata Search**
(search by single criteion)

ITU-R Recommendations
Series
Radio category
Services
Cross ref.
Resp. WPs
Approval

**(2) Metadata Search**
(search by multiple criteria)

Key Filters
Apply
Clear
Series
Radio category
Services
Resp. WPs
Cross ref.
Approval

ITU-R Recommendations

**(3) Link to Frequency Search Page**

You can also:

- **Search ITU-R Recommendations by Frequency Range**
- **Get help for using the interface**

(4) Explanation of search criteria

**Folders In-Force** ···

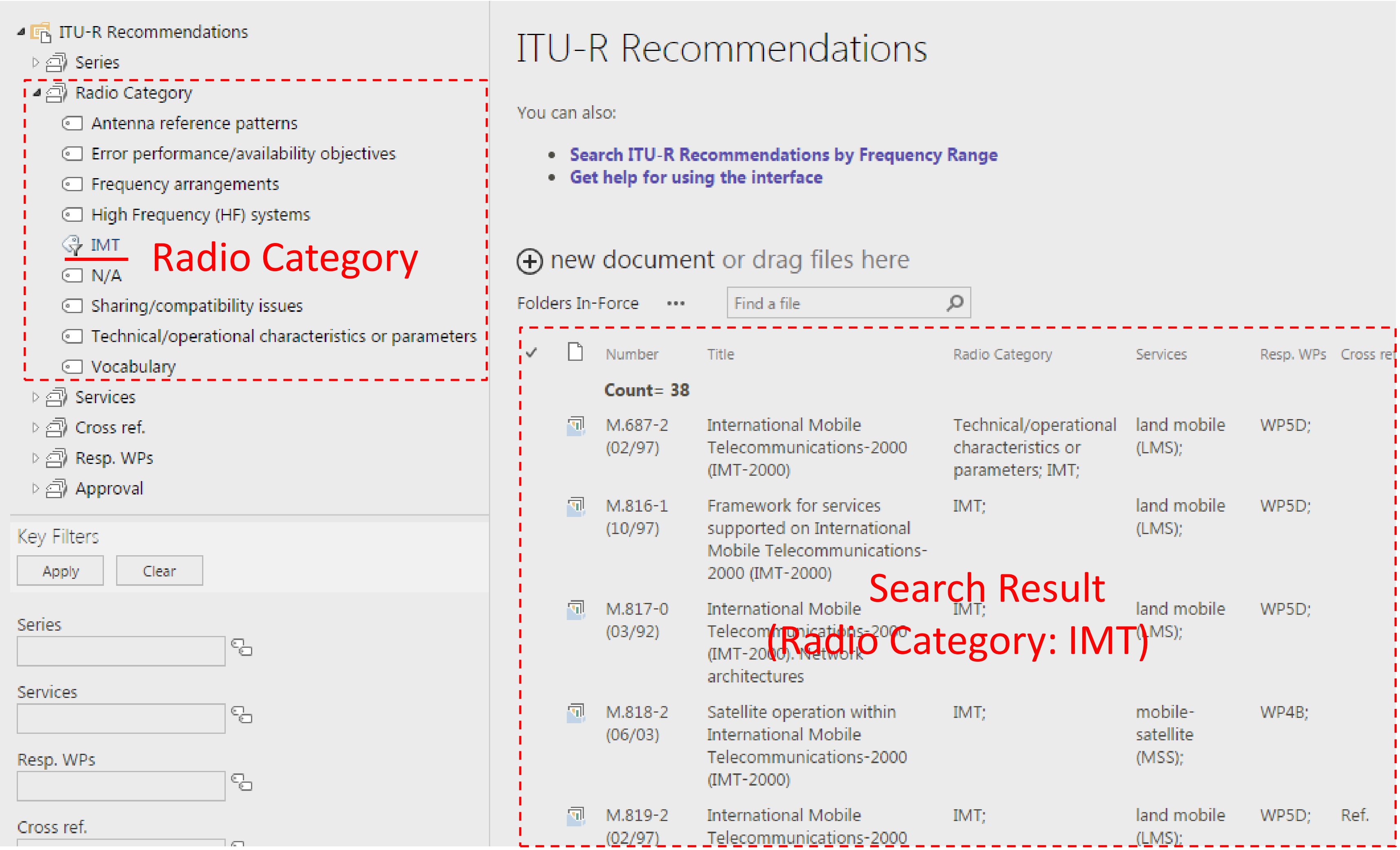
(5) Link to each ITU-R Recommendation's profile page
(incl. ITU-R Recommendation file download)

Search Result

| Number | Title | Radio category | Services | Resp. WPs | Cross ref. |
|---|---|---|---|---|---|
| | **Count= 1150** | | | | |
| BO.600-1 (07/86) | Standardized set of test conditions and measurement procedures for the subjective and objective determination of protection ratios for television in the terrestrial broadcasting and the broadcasting-satellite services | N/A; | broadcasting (BS);<br>broadcasting-satellite (BSS); | WP4A;<br>WP4B; | N/A |
| BO.650-2 (03/92) | Standards for conventional television systems for satellite broadcasting in the channels defined by Appendix 30 of the Radio Regulations | Technical/operational characteristics or parameters; | broadcasting-satellite (BSS); | WP4B; | N/A |
| BO.651-0 (07/86) | Digital PCM coding for the emission of high-quality sound signals in satellite broadcasting (15 kHz nominal bandwidth) | N/A; | broadcasting-satellite (BSS); | WP4B; | N/A |
| BO.652-1 (03/92) | Reference patterns for Earth-station and satellite antennas for the broadcasting satellite service in the 12 GHz band and for the | Antenna reference patterns; | broadcasting-satellite (BSS); | WP4A; | N/A |

# ITU-R Recommendations Search

**(1) Metadata Search** (search by single criterion)



- ITU-R Recommendations
  - Series
  - Radio Category
    - Antenna reference patterns
    - Error performance/availability objectives
    - Frequency arrangements
    - High Frequency (HF) systems
    - IMT
    - N/A
    - Sharing/compatibility issues
    - Technical/operational characteristics or parameters
    - Vocabulary
  - Services
  - Cross ref.
  - Resp. WPs
  - Approval

Radio Category

Key Filters

Series

Services

Resp. WPs

Cross ref.

## ITU-R Recommendations

You can also:

- **Search ITU-R Recommendations by Frequency Range**
- **Get help for using the interface**

new document or drag files here

Folders In-Force

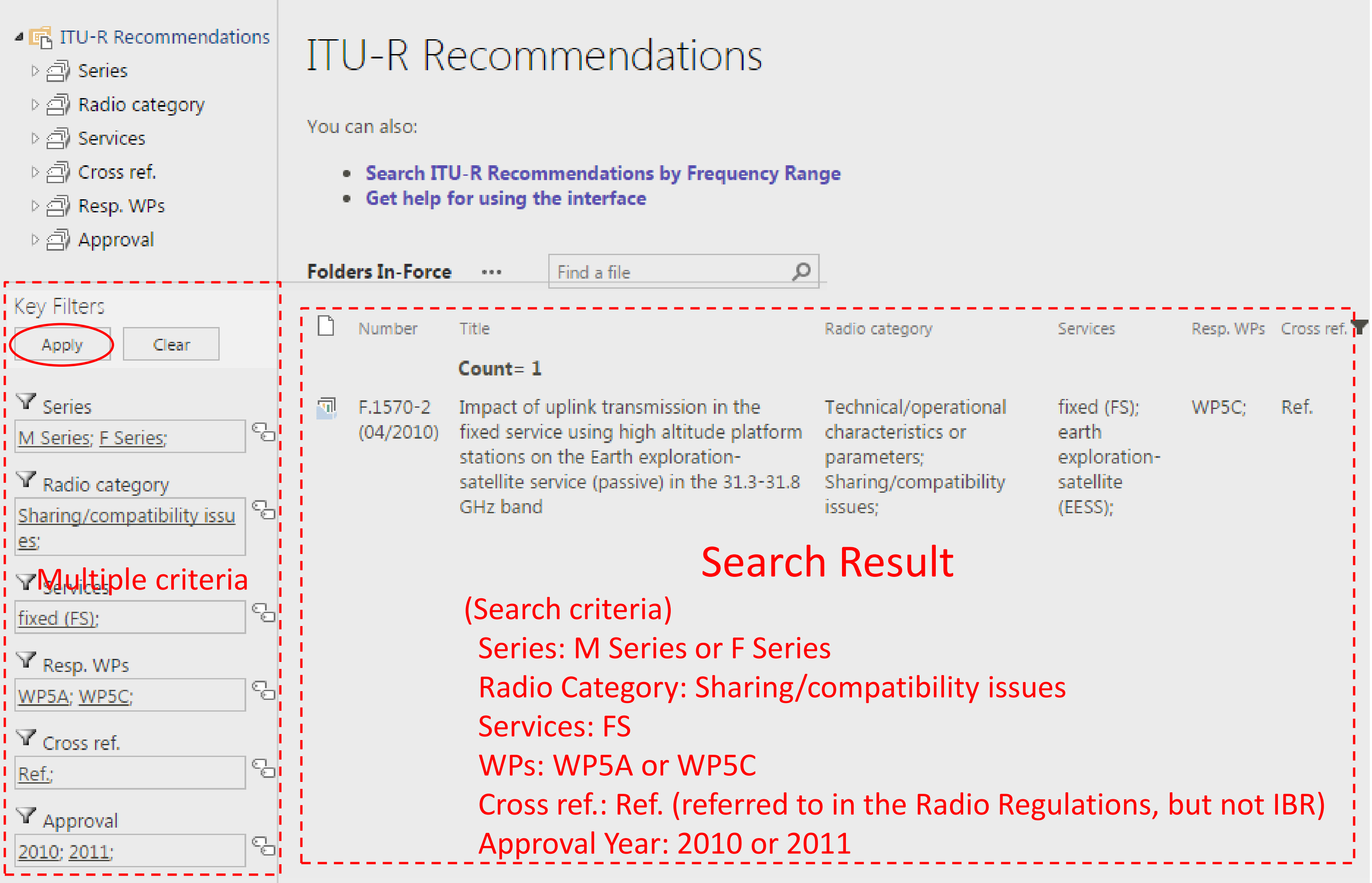
**Count= 38**

| Number | Title | Radio Category | Services | Resp. WPs | Cross ref |
|---|---|---|---|---|---|
| M.687-2 (02/97) | International Mobile Telecommunications-2000 (IMT-2000) | Technical/operational characteristics or parameters; IMT; | land mobile (LMS); | WP5D; | |
| M.816-1 (10/97) | Framework for services supported on International Mobile Telecommunications-2000 (IMT-2000) | IMT; | land mobile (LMS); | WP5D; | |
| M.817-0 (03/92) | International Mobile Telecommunications-2000 (IMT-2000). Network architectures | IMT; | land mobile (LMS); | WP5D; | |
| M.818-2 (06/03) | Satellite operation within International Mobile Telecommunications-2000 (IMT-2000) | IMT; | mobile-satellite (MSS); | WP4B; | |
| M.819-2 (02/97) | International Mobile Telecommunications-2000 | IMT; | land mobile (LMS); | WP5D; | Ref. |

Search Result (Radio Category: IMT)

# ITU-R Recommendations Search

**(2) Metadata Search** (search by multiple criteria)


ITU-R Recommendations
Series
Radio category
Services
Cross ref.
Resp. WPs
Approval
Key Filters
Apply
Clear
Folders In-Force
...
Find a file

ITU-R Recommendations

You can also:

- **Search ITU-R Recommendations by Frequency Range**
- **Get help for using the interface**

Series: M Series; F Series;

Radio category: Sharing/compatibility issues;

Services: fixed (FS);

Resp. WPs: WP5A; WP5C;

Cross ref.: Ref.;

Approval: 2010; 2011;

Multiple criteria

**Count**= 1

| Number | Title | Radio category | Services | Resp. WPs | Cross ref. |
|---|---|---|---|---|---|
| F.1570-2 (04/2010) | Impact of uplink transmission in the fixed service using high altitude platform stations on the Earth exploration-satellite service (passive) in the 31.3-31.8 GHz band | Technical/operational characteristics or parameters; Sharing/compatibility issues; | fixed (FS); earth exploration-satellite (EESS); | WP5C; | Ref. |

Search Result

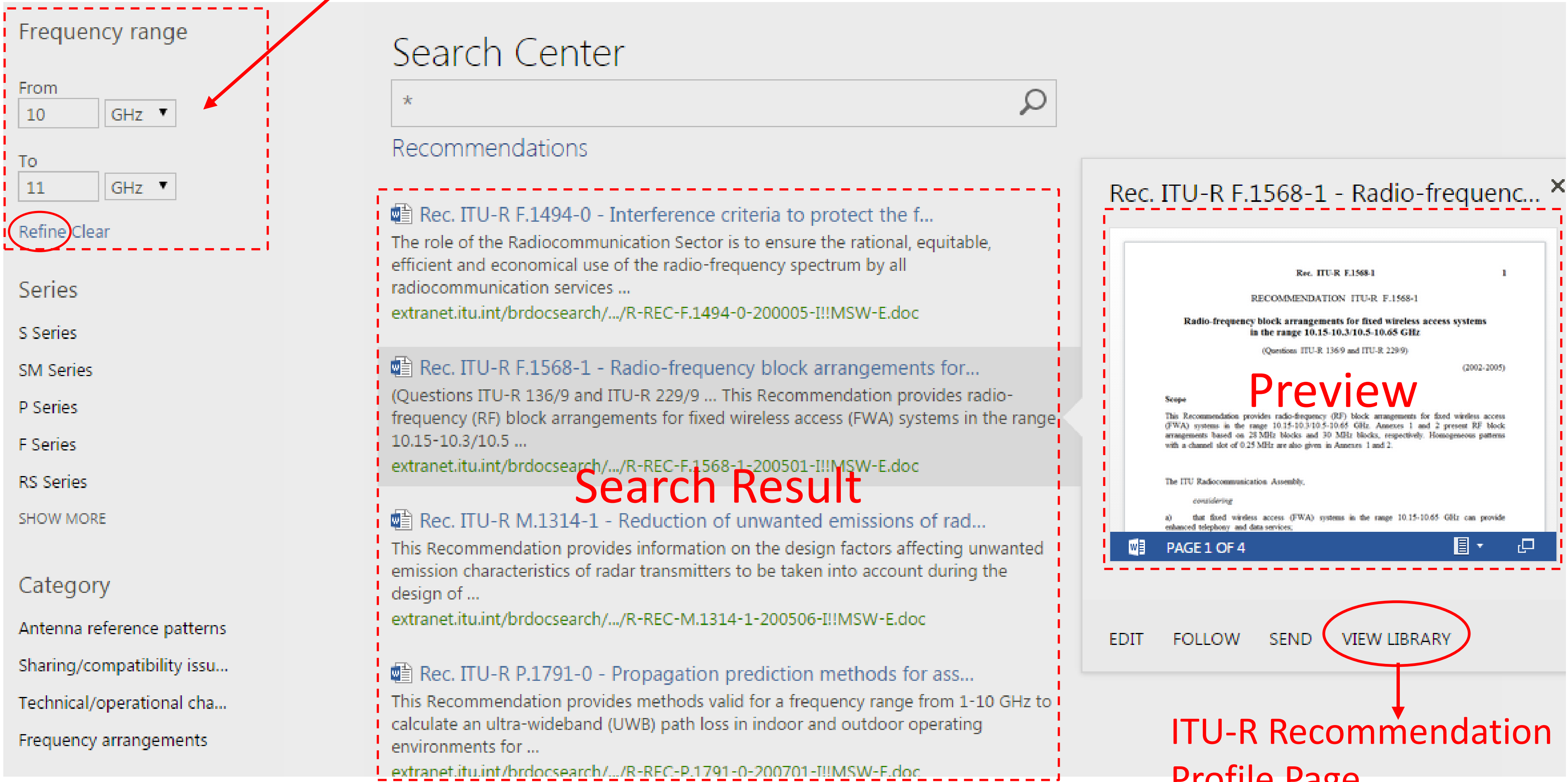
(Search criteria)

Series: M Series or F Series
Radio Category: Sharing/compatibility issues
Services: FS
WPs: WP5A or WP5C
Cross ref.: Ref. (referred to in the Radio Regulations, but not IBR)
Approval Year: 2010 or 2011

# ITU-R Recs Frequency Search

## (3) Frequency Search

Search by Frequency Range



Frequency range

From
10 GHz ▼

To
11 GHz ▼

Refine Clear

Series

S Series
SM Series
P Series
F Series
RS Series
SHOW MORE

Category

Antenna reference patterns
Sharing/compatibility issu...
Technical/operational cha...
Frequency arrangements

Search Center

*

Recommendations

Search Result

**Rec. ITU-R F.1494-0 - Interference criteria to protect the f...**
The role of the Radiocommunication Sector is to ensure the rational, equitable, efficient and economical use of the radio-frequency spectrum by all radiocommunication services ...
extranet.itu.int/brdocsearch/.../R-REC-F.1494-0-200005-I!!MSW-E.doc

**Rec. ITU-R F.1568-1 - Radio-frequency block arrangements for...**
(Questions ITU-R 136/9 and ITU-R 229/9 ... This Recommendation provides radio-frequency (RF) block arrangements for fixed wireless access (FWA) systems in the range 10.15-10.3/10.5 ...
extranet.itu.int/brdocsearch/.../R-REC-F.1568-1-200501-I!!MSW-E.doc

**Rec. ITU-R M.1314-1 - Reduction of unwanted emissions of rad...**
This Recommendation provides information on the design factors affecting unwanted emission characteristics of radar transmitters to be taken into account during the design of ...
extranet.itu.int/brdocsearch/.../R-REC-M.1314-1-200506-I!!MSW-E.doc

**Rec. ITU-R P.1791-0 - Propagation prediction methods for ass...**
This Recommendation provides methods valid for a frequency range from 1-10 GHz to calculate an ultra-wideband (UWB) path loss in indoor and outdoor operating environments for ...
extranet.itu.int/brdocsearch/.../R-REC-P.1791-0-200701-I!!MSW-E.doc

Rec. ITU-R F.1568-1 - Radio-frequenc...

Preview

Rec. ITU-R F.1568-1 1

RECOMMENDATION ITU-R F.1568-1

**Radio-frequency block arrangements for fixed wireless access systems in the range 10.15-10.3/10.5-10.65 GHz**

(Questions ITU-R 136/9 and ITU-R 229/9)

(2002-2005)

**Scope**

This Recommendation provides radio-frequency (RF) block arrangements for fixed wireless access (FWA) systems in the range 10.15-10.3/10.5-10.65 GHz. Annexes 1 and 2 present RF block arrangements based on 28 MHz blocks and 30 MHz blocks, respectively. Homogeneous patterns with a channel slot of 0.25 MHz are also given in Annexes 1 and 2.

The ITU Radiocommunication Assembly,

*considering*

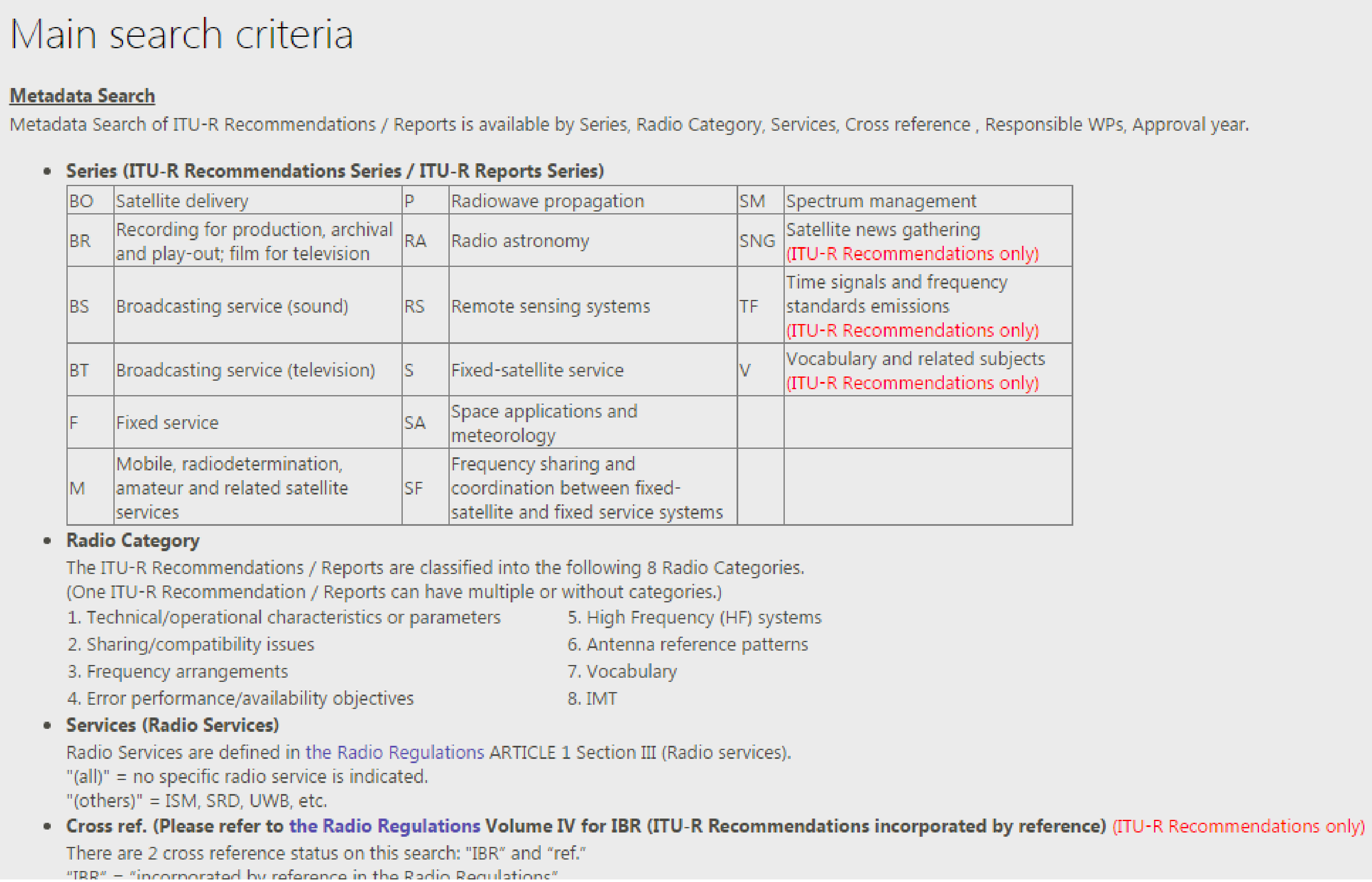
a) that fixed wireless access (FWA) systems in the range 10.15-10.65 GHz can provide enhanced telephony and data services;

PAGE 1 OF 4

ITU-R Recommendation Profile Page

# ITU-R Recommendations Search

## (4) Explanation of search criteria



## Main search criteria

**Metadata Search**

Metadata Search of ITU-R Recommendations / Reports is available by Series, Radio Category, Services, Cross reference , Responsible WPs, Approval year.

- **Series (ITU-R Recommendations Series / ITU-R Reports Series)**

| | | | | | |
|---|---|---|---|---|---|
| BO | Satellite delivery | P | Radiowave propagation | SM | Spectrum management |
| BR | Recording for production, archival and play-out; film for television | RA | Radio astronomy | SNG | Satellite news gathering (ITU-R Recommendations only) |
| BS | Broadcasting service (sound) | RS | Remote sensing systems | TF | Time signals and frequency standards emissions (ITU-R Recommendations only) |
| BT | Broadcasting service (television) | S | Fixed-satellite service | V | Vocabulary and related subjects (ITU-R Recommendations only) |
| F | Fixed service | SA | Space applications and meteorology | | |
| M | Mobile, radiodetermination, amateur and related satellite services | SF | Frequency sharing and coordination between fixed-satellite and fixed service systems | | |

- **Radio Category**

  The ITU-R Recommendations / Reports are classified into the following 8 Radio Categories.
  (One ITU-R Recommendation / Reports can have multiple or without categories.)

  1. Technical/operational characteristics or parameters
  2. Sharing/compatibility issues
  3. Frequency arrangements
  4. Error performance/availability objectives
  5. High Frequency (HF) systems
  6. Antenna reference patterns
  7. Vocabulary
  8. IMT

- **Services (Radio Services)**

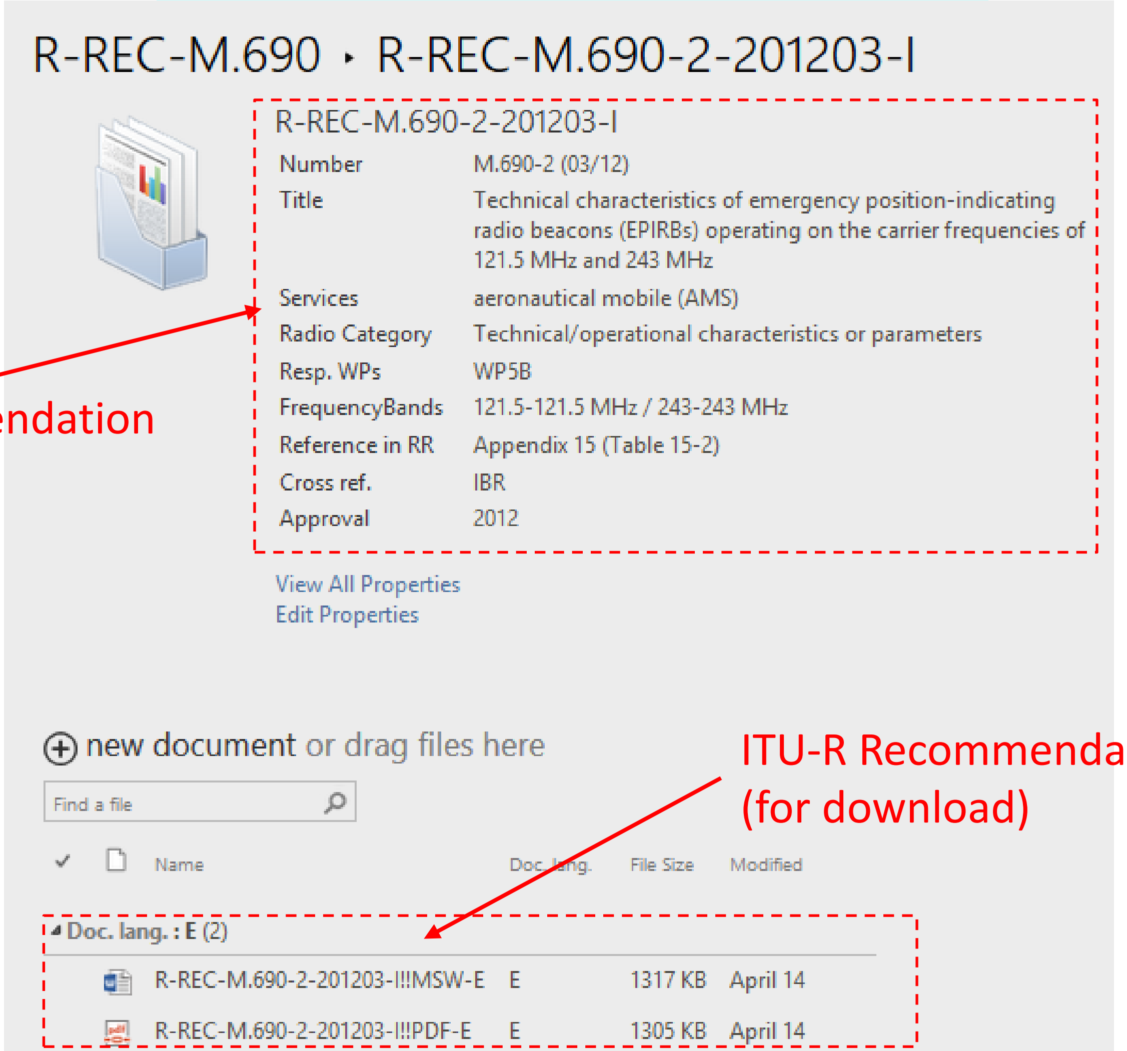
  Radio Services are defined in the Radio Regulations ARTICLE 1 Section III (Radio services).
  "(all)" = no specific radio service is indicated.
  "(others)" = ISM, SRD, UWB, etc.

- **Cross ref. (Please refer to the Radio Regulations Volume IV for IBR (ITU-R Recommendations incorporated by reference)** (ITU-R Recommendations only)

  There are 2 cross reference status on this search: "IBR" and "ref."
  "IBR" = "incorporated by reference in the Radio Regulations"

# ITU-R Recommendations Search

## (5) ITU-R Recommendation Profile Page



R-REC-M.690 ‣ R-REC-M.690-2-201203-I

R-REC-M.690-2-201203-I

| | |
|---|---|
| Number | M.690-2 (03/12) |
| Title | Technical characteristics of emergency position-indicating radio beacons (EPIRBs) operating on the carrier frequencies of 121.5 MHz and 243 MHz |
| Services | aeronautical mobile (AMS) |
| Radio Category | Technical/operational characteristics or parameters |
| Resp. WPs | WP5B |
| FrequencyBands | 121.5-121.5 MHz / 243-243 MHz |
| Reference in RR | Appendix 15 (Table 15-2) |
| Cross ref. | IBR |
| Approval | 2012 |

View All Properties
Edit Properties

⊕ new document or drag files here

Find a file

| ✓ | Name | Doc. lang. | File Size | Modified |
|---|---|---|---|---|
| Doc. lang. : E (2) | | | | |
| | R-REC-M.690-2-201203-I!!MSW-E | E | 1317 KB | April 14 |
| | R-REC-M.690-2-201203-I!!PDF-E | E | 1305 KB | April 14 |

Detail Profile of selected Recommendation

ITU-R Recommendation file (for download)

# Future work

- **Further development of ITU-R Documents Database Search Facility (Data preparation and search tool development for ITU-R Resolutions and ITU Handboks)**

- **Continuous reviews and updates of ITU-R Documents Database Search Facility data (at the timing of new document approval, revision, suppression of document)**

- **Establishment of working procedures specifying roles & responsiblities of the ITU/BR and ITU-R SGs/WPs to maintain the database**

- **Development of mobile application to make it accessible by mobile terminals**

# *Thank you!*

*For comments or feedbacks,*

Contact
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