ITUEvents

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





Frequency Overlap to Establish Coordination Requirements

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ITU HQ Geneva, 7 December, 2018

Forms of Coordination

No.9.6:Before BiU or Notify in cases below shall effect coordination (No.9.27/AP 5 -Table 5-1)

Cases	Provision
GSO to GSO	9.7, Art7 AP30/30A
Certain ES of GSO to NGSO	9.7A
NGSO to Certain ES of GSO	9.7B
BSS (GSO/NGSO) to Terrestrial Services	9.11, Res.539
NGSO to NGSO	9.11A/9.12
NGSO to GSO	9.11A/9.12A
GSO to NGSO	9.11A/9.13
NGSO/GSO to Terrestrial Services	9.11A/9.14
the requirement to seek the <u>agreement</u> of other administrations is included in a footnote to the Table of Allocation	9.21 A/B/C

Frequency Overlap with Space Services Exercises



BRS-SIS SpaceQry



Space Information System (SNS v8)



https://www.itu.int/en/ITU-R/software/Pages/brsis.aspx

BR-SIS - BR Space Information System

Following RAG recommendations, the BR Space Information System (BR-SIS) has been designed and developed by the BR.

All BR Soft applications will be rewritten in the BR Space Information System following the established architecture. The aim is to build one single user interface that will integrate in the future all BR Space services.

This system will provide a rich end-user experience, a common look and feel in all BR applications, a gain in term of training and productivity.

The first BR application to be integrated in the BR-SIS, is **SpaceQry**. Others BR applications will come little by little. The second BR application to be integrated in the BR-SIS v8, is **SRSConvert**. It will provide you the facility to convert SNS v7 databases to v8.

Installation file

- The installation file below is a self-extracting setup file.
- . To download and install BR-SIS software, click on the link and save the file to a temporary directory on your PC
- After downloading the file, you should then run the file (by double-clicking on it from Windows Explorer, etc.); this will decompress the installation files into a temporary directory on your hard disk, and then automatically execute the setup procedure

Note: The BR-SIS installation is also available on BR IFIC DVD.

D٥١	wnload	Description	Size	Date
≛	Install_BR-SIS_v8.exe	Installation file Version 8.0.1.5	145 MB	19 February 2018
<u>+</u>	Install_BR-SIS.exe	Installation file Version 7.0.0.2	86.1 MB	26 May 2016
<u>+</u>	What's new	What's new in BR-SIS	94.1 kB	19 February 2018
<u>+</u>	Presentation WRS2014	Presentation WRS2014	1.16 MB	21 November 2014

License Agreement

Setup SpaceQry

- Select "SpaceQry"
 Select a database
- Select Microsoft access
 Browse and Find the directory where
 "srs_all.mdb" is located
- 3. Click Start



Note: in USB Key, the srs_all database is in this directory: D:\BRIFIC-2884\Space\Databases_v8\SRS_Data, under the name srs2884_part1of2.mdb



Overlap Tab

Select Overlap query To identify which networks contain frequency which overlap a given frequency band or group of bands



Exercise 1







Input Data

- Include network freq, Select "No"
- 2. Enter Date of receipt
 (for this exercise: <= 22/07/2018)
 3. Click Search

			Select for Data Grid Setting											
Set search criteria	🚖 Favorites	Clear S	QL	《	Overlap	Verlap								
\cap					Results: 186 rows foun	d in srs_all.mdb Exp	ort 📄 🚖 SQL	Y 🗐 🔍 🗄						
	2 Sear	ch			Type_of_notice	ntc_id	ntc_type	prov	adm					
\sim					Coordination	105520076	G	9.6	ARS					
					Coordination	117520218	G	9.6	ARS					
Frequency criteria				^	Coordination	117520216	G	9.6	ARS					
Network frequency b	ands (non-overlapp	oing)			Coordination	117520215	G	9.6	ARS					
Freq. Min. (MHz)	Freq. Max. (MF	lz)	2		Coordination	117520217	G	9.6	ARS					
1518	1559		-		Notification	104500283	G	11.2	AUS					
1610	1660.5		\geq		Notification	108512011	G	11.2	AUS					
1668	1675				Due diligence	98590535	G	RS49	AUS					
1980	2010	-			Coordination	91980032	G	RR1060	AUS					
Included frequency b	bands		_		Notification	302512001	G	RR1488	AUS					
Freq. Min. (MHz)	Freq. Max. (MH	Hz)	+		Notification	100500300	G	11.2	AUS					
1610	1626.5		-		Notification	306512027	G	11.2	AUS					
					Due diligence	98590529	G	RS49	AUS					
					Coordination	95520151	G	RR1060	CHN					
		-		=	Notification	107500480	G	11.2	CHN					
Include network frea	. 🔘 Yes 🔘 No 🔇	D Logical A	ND		Notification	103500422	G	11.2	CHN					
				_ []	Notification	109500876	G	11.2	CHN					
More criteria					Due diligence	98590499	G	RS49	CHN					
Notice level					Coordination	95520152	G	RR1060	CHN					
Date of receipt 22/	/07/2018 💌 🔘 =	. () <=	◎ >=		Notification	103500423	G	11.2	CHN					
Orbital longitude de	elta (degrees)				Notification	109500877	G	11.2	CHN					
Geo. Non-G	an Specific I	Typical			Notification	107500479	G	11.2	CHN					
Geo. Minon-G	ieo. E specific E	зтурісаі			•									
Beam level														
Emission	Reception				Description of c	olumn'Type of notic	ce'							

Data Grid Settings

- 1. Select "Filter DropDown Lists"
- 2. Select Checked
- 3. Select "Save changes and close"

Settings		
Data (Grid Settings	Restore default and close
The Resul	t Data Grid can be customized by activating or not the option:	Save changes and close
Group Panel	Regular and Checked Filter Dropdown Lists	2
Automatic Filter Row	Which option do you want to activate? Regula	ar Checked
Filter DropDown Lists	The file days are been staded at the file	
Best Fit Columns	The filter dropdown can be represented as a regular list of i checked list (multiple items can be selected/checked simult	items (one item at a time can be selected) or as a aneously)
Report Template	Regular Filter Dropdown List	Checked Filter Dropdown List
Report Page Setup	adm. ⁹ ntwk o	adm.
	INS (Blanks)	AUS (Select All)
	J AFS =	AUS AIG
	ARS ARG	AUS ARM
	CHN ARM	B ARS
	CHN ARS	AUS
	AUS	AZE
	CHN AZE	■
	CHN BEL	
	B PLP	AUS BLK
	B BOI	AUS BRU
	B BRU	B BUI
4		•

				Filter as	necessary	,							
	Onl Coc	l <mark>y "Noti</mark> ordinati	fica on"	ition and	\Only '	'N "							
ITU-BR Space Informatio	TU-BR Space Information System v8.0.1.6												
Set search criteria	Favorites Clear	SQL	«	Overlap									
Q	Search			Results: 26 rows found i Type_of_notice Coordination	n srs_all.mdb Expo ntc_id 112520031	rt 📄 🚖 SQL ntc_type ⁹ N	P 🛱 🔍 🛱 prov 9.6	adm CHN	ntwk_org	ctry			
Frequency criteria	Ť			Notification	118500146	N	11.2	CHN					
Network frequency band	s (non-overlanning)			Coordination	110520285	N	9.6	CHN					
Erea Min (MHz)	Free Max (MHz)	~		Coordination	115520119	N	9.6	D					
1E10	1EE0			Coordination	115520048	N	9.6	F					
1610	1660.5			Coordination	115520171	N	9.6	F					
1669	1675	- ×		Coordination	116520228	N	9.6	F					
1668 1675				Coordination	117520372	N	9.6	F					
1900	2010	•		Coordination	117520487	N	9.6	F					
Included frequency band	5			Coordination	117520492	N	9.6	F					
Freq. Min. (MHz)	Freq. Max. (MHz)	-		Coordination	110520102	N	9.6	F					
1610	1626.5	^		Notification	115500121	N	11.2	F					
				Notification	318500086	N	11.2	F					
				Notification	116512040	N	11.2	F					
		•	=	Coordination	116520407	N	9.6	HOL					
Include network freq.) Yes 🔘 No 🔘 Logie	cal AND		Coordination	116520069	N	9.6	LUX					
A More criteria				Notification	90504410	N	RR1488	RUS					
				Notification	97500304	N	11.2	RUS					
Notice level				Coordination	116520443	N	9.6	SLM					
Date of receipt 22/07/2	2018 💌 🔘 = 🔘 <	<= ())>=		Coordination	92520145	N	9.6	USA					
Orbital longitude delta	(degrees)			Notification	318512001	N	11.2	USA					
Geo. 🔽 Non-Geo.	Specific Typic	al		Notification	95500672	N	11.2	USA					
	/					11/1							
Beam level				✓ [Type_of_notice] In ('0)	Coordination', 'Notifica	ition') And [ntc_type]	In ('N') +						
Emission Rece	ption		-	Description of co	lumn 'Type_of_notic	e'							

List of Administrations under 9.13 and 9.21/B: CHN, D, F, HOL, LUX, RUS, SLM, USA

ITU-BR Space Information System v8	3.0.1.6										
۲											
Set search criteria 🙀 Favorites	Clear	SQL		Overlap							
\cap				Results: 20	5 rows found	in srs_all.mdb Expo	rt 🗎 🚖 SQL '	9 = Q =	1		
	earch			Type_of	notice ⁹	ntc_id	ntc_type 🕈	prov	adm	ntwk_org	ctry
		J		Coordin	ation	112520031	N	9.6	CHN		
				Notifica	tion	118500146	N	11.2	CHN		
Frequency criteria			*	Coordin	ation	110520285	N	9.6	CHN		
Network frequency bands (non-overl	apping)			Coordin	ation	115520119	N	9.6	D		
Freq. Min. (MHz) Freq. Max.	(MHz)	2		Coordin	ation	115520048	N	9.6	F		
1518 1559		<u>-</u>		Coordin	ation	115520171	Ν	9.6	F		
1610 1660.5		\sim		Coordin	ation	116520228	N	9.6	F		
1668 1675				Coordin	ation	117520372	N	9.6	F		
1980 2010		-		Coordin	ation	117520487	N	9.6	F		
Included frequency bands				Coordin	ation	117520492	N	9.6	F		
Freq. Min. (MHz) Freq. Max. ((MHz)	+		Coordin	ation	110520102	N	9.6	F		
1610 1626.5		^		Notifica	tion	115500121	N	11.2	F		
				Notifica	tion	318500086	N	11.2	F		
				Notifica	tion	116512040	N	11.2	F		
		-	Ξ	Coordin	ation	116520407	N	9.6	HOL		
Include network freq. 🔘 Yes 💿 No	D Cogic	al AND		Coordin	ation	116520069	N	9.6	LUX		
				Notifica	tion	90504410	N	RR1488	RUS		
More criteria				Notifica	tion	97500304	N	11.2	RUS		
Notice level				Coordin	ation	116520443	N	9.6	SLM		
Date of receipt 22/07/2018 🔹 🤇) = 🔘 <	=		Coordin	ation	92520145	N	9.6	USA		
Orbital longitude delta (degrees)				Notifica	tion	318512001	N	11.2	USA		
Geo. Non-Geo. Specific	Tvpica	al de la companya de		Notifica	tion	95500672	N	11.2	USA		
				•			1111				
Beam level				🗹 [Туре_	of_notice] In ('	'Coordination', 'Notifica	ation') And [ntc_type] I	in ('N') +			
Emission Reception				De	scription of co	olumn 'Type_of_notic	e'				

List of Satellite Networks

BR Space Information	on System v8.0.1.6											
	2											
earch criteria 🛛	Favorites Clear	s	2L	«	Ov	erlap						
					Resi	ults: 26 rows found in	srs all.mdb Export	🖹 🏡 sol 🕈				
	Canada					adm	ntuk ora	day and the second		wic no	atf rea	cat name
Search							ntwk_org	cuy	18.02.2012	wic_no 2741	nu_rsn	
					Ľ-	CHN			16.02.2012	2/41	N	COMPASS-IGSO
uency criteria				*		CHN			06.07.2016	20/9	N C	COMPASS-IGSO
ork frequency band	ds (non-overlapping)								10.02.2016	2041	C C	COUPER 2
eg. Min. (MHz)	Freq. Max. (MHz)		2			С С			25.02.2015	2042	C C	AST NG C 1
518	1559					r c			19.00.2015	2032	c c	ASTING C 2
510	1660.5		~			r F			20.06.2016	2027	c	AST-NG-C-2
568	1675		~			F			05 10 2017	2052	c	AST-NG-C-4
980	2010	-				F			21 12 2017	2002	c	EB-SAT-LEO-1
ded frequency band	ds					F			21.12.2017	2873	c	EB-SAT-LEO-1R
rea. Min. (MHz)	Freq. Max. (MHz)		+			F			08.03.2010	2694	c	HIBLEO-X
510	1626.5		_			F			18.08.2015	2818	N	HIBLEO-X
	102003					F			24.04.2018	2872	N	HIBLEO-X
						F			22.11.2016	2855	N	HIBLEO-X
		-		=		HOL			29.12.2016	2864	c	HOL-MG-A006
da natuark frag	Vac 🔍 Na 🔍 Laai					LUX			29.02.2016	2842	c	CLEOSAT
de network neq.						RUS			04.11.1982		N	GLONASS
More criteria						RUS			30.03.2017	2873	N	GLONASS-M
ice level						SLM			30.12.2016	2864	с	SI-SAT-KURUKURU
e of receipt 22/07/	2018 🔹 🔘 = 🔘	<= (◎ >=			USA			05.12.2012	2755	с	HIBLEO-2
ital longitude delta	(degrees)					USA			05.06.2018	2876	N	HIBLEO-2
						USA			22.12.2006	2823	N	HIBLEO-2
Geo. 🔟 Non-Geo.	эресітіс Пуріс	al			•	(
m level					\checkmark	[Type_of_notice] In ('Co	ordination', 'Notificatio	on') And [ntc_type] In ('	N') -			
Emission 📃 Rece	eption				0	Description of colu	imn 'Type of notice'					
				Ŧ								

Exercise 2



Exercise 2-1





Set search criteria	🚖 Favorites	Clear	SQL	
\bigcirc	Se	arch		
Included frequency b	ands		— .	-
Freq. Min. (MHz)	Freq. Max. (MHz)	- *	
Include network freq. More criteria Notice level Date of receipt 01/	Yes No No 08/2018 •	 Logic) = 	al AND	
Orbital longitude de	eo. 🔲 Specific	🔲 Туріса	al	
Beam level	leception			
Group level <i>Findings:</i> Favor <i>Publication:</i> BR IFI <i>Date of effective publicate</i>	able Unfav. C No rotection	Unspe	ecified	E
Task: SpaceQry Dat	abase: C:\BR_SO	FT\SRS_DE	}\srs_all.m	db

Input Data

- Include network freq, Select "No"
- 2. Enter Date of receipt
 (for this exercise: 01/08/2018)
 3. Click Search

RESULTS

List of	Ac	d ministra	tions unde	r 9.12A:			
ALG	ΛΡ			C/ARR	ΔΗς Δ	7F B	
ITU-BR Space Information System v8.0.1.8			I, ANS, AN	STAND,	A03, P	_L, D,	
🚯 🔞 BLR,	BO	L, BUL,	CAN, CBG	, CHN,	CLM, C	СΥР,	
Set search criteria 🙀 Favorites Char 201	┛, ſ	EvylapEGY, I	: H, F, F/E	UI, GR	C, HOL	, I, IND,	▼ X
Search NS. I	RN	Results: 1,550 rows found	in srs_all.mdb Export			Onthe way X. stry	d rcv
		Coordination	113520121 G	9.6	ALG		29.05.2013
	N	Latingation				2	17.05.2018
Included frequency bands	, ••	Coordination	114520218 G	9.6	ALG	Y	18.02.2015
Freq. Min. (MHz) Freq. Max. (MHz)		Coordination	113520066 G		ARG		27.03.2013
	, r	Application	J, Utal s KU	5, KUS		SUI ,	27.05.2015
	1	Coordination	115520102 G	9.6	ARG		27.05.2015
ТНА	TL			ΙΙ	ARG		27.05.2015
		Coordination	11752022, G	9.6	ARG		30.06.2017
Include network freq. 🔘 Yes 💿 No 🔘 Logical AND		Coordination	113520013 G	9.6	ARM		18.04.2013
More criteria		Coordination	117520084 G	9.6	ARS		22.01.2017
-Natica laval		Coordination	117520085 G	9.6	ARS		22.01.2017
		Coordination	105520072 G	9.6	ARS	ARB	10.01.2012
		Notification	110500040 G	11.2	ARS	ARB	10.01.2012
Orbital longitude delta (degrees)		Coordination	105520073 G	9.6	ARS	ARB	16.06.2012
🕼 Geo. 📝 Non-Geo. 🔲 Specific 🔲 Typical		Notification	111500061 G	11.2	ARS	ARB	16.06.2012
		Notification	111512003 G	11.2	ARS	ARB	03.05.2011
Beam level		Coordination	105520074 G	9.6	ARS	ARB	17.05.2012
Emission Reception		Notification	111500210 G	11.2	ARS	ARB	04.01.2016
Group level		Notification	111500012 G	11.2	ARS	ARB	29.01.2011
Findings: 🔽 Favorable 🔽 Unfav. 🔽 Unspecified		Coordination	105520076 G	9.6	ARS	ARB	11.10.2006
Dublication: PD IEIC No.		Notification	111500139 G	11.2	ARS	ARB	17.05.2012
Publication: BRIFIC NO		Coordination	109520112 G	9.6	ARS	ARB	24.11.2015 🗸
Date of effective protection		•					•
Date 🔹 🔍 = 🔘 <= 🔘 >=		☑ [Type_of_notice] In ('Co	oordination', 'Notification') And [n	c_type] In ('G') +			08
Ouary require based on Task: SpaceQny Database: C:\BR_SOFT\SRS_DB\srs_all.mdb		C Description of colu	umn 'Type_of_notice'				18.42
	8	🌌 💛 📱	Ë.			EN 🚎	10:45

RESULTS

ITU-BR Space Informat	tion System v8.	0.1.8			and a little part of the second	Name 1	-					
	?				Li	ist of Sat	ellite	Network	s			
Set search criteria	🚖 Favorites 🗌	Clear	SQL		Overlap		1					▼ X
\cap					Results: 1,550 rows foun	d in srs_all.mdb Expo	rt 🚔 🚖 SQI	Y = Q =				
	Se	arch			d_rcv	wic_no	ntf_rsn	sat_name	long_nom	st_cur	plan_id	f_aa_type
					29.05.2013	2766	С	ALCOMSAT-24.8W	-24.8	50		
					17.05.2018	2873	N	ALCOMSAT-24.8W	-24.8	20		
Included frequency ban	nds		. .	*	18.02.2015	2812	с	ALCOMSAT-27.6W	-27.6	50		
Freq. Min. (MHz)	Freq. Max. (N	MHz)	*		27.03.2013	2762	с	ARSAT-D	-81	50		
18800	19700		^		27.05.2015	2818	С	ARSAT-F	-91.5	50		
					27.05.2015	2818	с	ARSAT-G	-72	50		
					27.05.2015	2818	с	ARSAT-H	-38.5	50		
			•		30.06.2017	2877	с	ARSAT-M	-81	50		
Include network freq.	🔘 Yes 🔘 No	Content Con	AND		18.04.2013	2762	с	ARMSAT1	71.4	50		
More criteria					22.01.2017	2869	с	S2	37	50		
Natice level					22.01.2017	2869	С	S2-N	41	50		
	V2010 - @		0.		21.09.2017	2881	С	AUS-NBN-135E	135	50		
Date of receipt 01/08	\$72018) = ● <=	()>=		21.09.2017	2881	С	AUS-NBN-142.5E	142.5	50		
Orbital longitude delta	a (degrees)				21.09.2017	2881	С	AUS-NBN-148E	148	50		
🗹 Geo. 📝 Non-Geo	o. 🔲 Specific	Typical			18.05.2011	2861	с	AUS-NBN-3	140	52		
				- 11	29.09.2015	2822	N	AUS-NBN-3	140	19		
Beam level	contion				10.02.2017	2858	N	AUS-NBN-3	140	50		
Emission Kee	ception				18.05.2011	2720	с	AUS-NBN-4	145	50		
Group level				- 1	20.02.2017	2865	N	AUS-NBN-4	145	19		
Findings: 📝 Favorab	ble 📝 Unfav.	🔽 Unspeci	ified		17.09.2015	2825	с	AUSSAT F 156E	156	50		
Publication: BR IEIC	No				17.09.2015	2825	с	AUSSAT F 160E	160	50		
Publication. Divisio					24.06.2003	2788	С	DEF-R-SAT-4B 121	121	52		
Date of effective pro	tection				•							•
Date 💌	◎ = ◎ <	=			☑ [Type_of_notice] In ('C	oordination', 'Notification	n') And [ntc_type]]	In ('G') -				08
Ouen: results has Task: SpaceQry Datab	ad on base: C:\BR_SOF	FT\SRS_DB\s	srs_all.mo	db	Description of col	umn 'Type_of_notice'						
👌 🌔				L	孩 🜔 🚺	2 w] 🛛					EN 🗃 🔺 🖿 🛱	した 19:02 19/11/2018

- 0

Exercise 2-2







TU-BR Space Information System v8.0.1.8	and a second
Set search criteria 🙀 Favorites Clear SQL	
Search	
Freq. Min. (MHz) Freq. Max. (MHz)	
▶ 17800	
Include network freq. O Yes O No C Logical AND	More Criteria
More criteria	
Notice level	(for this exercise: <= 01/08/2018)
Date of receipt 01/08/2018 • 0 = 0 <= 0 >=	2 Click Specific
Orbital longitude delta (degrees)	2. Click Specific
Geo. Non-Geo. Specific Typical	
Beam level	
Group level	
Findings: V Favorable V Unspecified	
Publication: BR IFIC No	
Date of effective protection	
Date • • • • • • • • • • • • • • • • • • •	
Task: SpaceQry Database: C:\BR_SOFT\SRS_DB\srs_all.mdb	



RESULTS

List of Administrations

List of Large Earth Stations



Exercise 3







Filter as necessary



RESULTS

ITU-BR Space Information System v8.0.1.8				and freedback				
List o	f Adı	ministrati	ons	Li	st of Sa		(S	
Set search criteria 🙀 Favorites 🛛 Clear SQL 🛛 🔌	Overlap							• ×
\bigcirc	Results: 5	9 rows found in srs_all.md	b Detail of 1045004	27 📽 🏠 Export	🖹 🚖 SQL 🌱			
Search		▲ adm	ntwk org	ctry	d rcv	wic no ntf rsn	sat name	long n
	•	AUS			07.09.2004	2580 N	FEDSAT-1 19	
		AUS			23.02.2007	2609 N	FEDSAT-1_19	
Included frequency bands	A	CAN			15.03.2011	2770 N	CASCADE-CX	
Freq. Min. (MHz) Freq. Max. (MHz) 🚽		CAN			27.04.2018	2879 N	COMMSTELLATION	
19700 20200		CAN			27.11.2015	2840 C	102	=
		CAN			29.06.2017	С	102	
		CAN			01.06.2017	2863 C	CANPOL	
•		CAN			26.06.2017	2863 C	CANPOL-2	
Include network freq. O Yes O No C Logical AND		CAN			09.02.2017	С	CANPOL-3	
		CAN			09.02.2017	2870 C	CANPOL-3	
More criteria		CAN			29.12.2016	2864 C	CANSAT-LEO	
Notice level		CAN			13.03.2008	2843 C	CASCADE-CX	
Date of receipt 07/12/2018 ▼		CAN			23.04.2018	2879 C	COMMSTELLATION	
Orbital longitude delta (degrees)		CAN			28.12.2016	2867 C	MAPLELEAF-1	
Geo, Von-Geo, Specific V Typical		CHN			17.07.2018	2882 C	ACONNECT	
		CHN			29.09.2017	2882 C	ACONNECT	
Beam level		CHN			17.07.2018	2882 C	ACONNECT-T	
Emission Reception		CHN			29.09.2017	2882 C	ACONNECT-T	
Group level		CHN			12.02.2018	2875 C	FORTRAN	
Findings: 🛛 Favorable 📝 Unfav. 📝 Unspecified		CHN			25.08.2017	2881 C	FORTRAN-2	
Dublications DD ITIC No.		CHN			18.07.2018	2882 C	SIGNSAT-NGSO	
Publication: BK IFIC NO		CHN			28.12.2017	2873 C	SPACEWAY	-
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Task: SpaceQry Database: C:\BR_SOFT\SRS_DB\srs_all.mdb	-						Sunday, Novem	ber 25, 201
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Questions



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