

INTERNATIONAL CIVIL AVIATION ORGANIZATION
ASIA AND PACIFIC OFFICE



REGIONAL SUPPLEMENT
TO
THE ASTERIX INTERFACE CONTROL DOCUMENT (ICD)
FOR THE ASIA/PAC REGION

SECOND EDITION

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***Regional Supplement to the
All Purpose Structured Eurocontrol Surveillance
Information Exchange (ASTERIX) ICD
for the ASIA/PAC Region***

***System Area Code (SAC) and
System Identification Code (SIC)***

ADDRESSING SCHEME OF RADAR DATA EXCHANGE

1. General

In order to avoid ambiguity, every radar system (i.e. radar sensor, radar data processing system, server) shall have a unique identification within the Asia and Pacific regions to represent either a radar source or a sink, participating in the radar data exchange.

2. Syntax

The format of System Identifier field of radar data exchange shall be composed of two subfields as illustrated below:

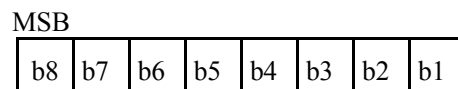


	Field Name	Element Type	Field Size
SAC	System Area Code	Binary	One octet
SIC	System Identification Code	Binary	One octet

2.1 System Area Code (SAC)

2.1.1 The SAC field shall consist of an eight-bit number assigned to a country or a territory.

2.1.2 The SAC field format shall be as illustrated below:



Where: b represents a binary digit and the MSB stands for Most Significant Bit

2.1.3 System Identification Code (SIC)

2.1.3.1 The SIC shall consist of an eight-bit number assigned to each radar system (radar sensor, processing system, server, etc.) located in the country or territory as defined by the SAC.

2.1.3.2 The SIC field format shall be as illustrated below:

MSB

b8	b7	b6	b5	b4	b3	b2	b1
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Where: b represents a binary digit and MSB stands for the Most Significant Bit

2.1.4 The individual SICs are assigned by the National Administration concerned within the area identified by the SAC and are published in the this Document.

2.1.5 Within a country or territory identified by a SAC up to 256 individual codes (SICs) can be assigned.

2.1.6 The SICs shall be indicated by decimal and presented by binary in their relevant tables.

2.1.7 **Recommendation** *The assignment of SICs could be divided into groups by different functions and facilities categories.*

3. Assignment of the Systems Identifiers

3.1 System Area Codes

3.1.1 One SAC is assigned to each country or territory.

3.1.2 **Recommendation** *When needed, more than one SAC could be assigned to a single country or territory, for example, to differentiate between civil and military applications.*

3.1.3 The SACs allotment is provided in the Table 1 - System Area Codes (SAC)

3.1.4 Amendments to the System Area Codes (SAC) shall be coordinated by ICAO ASIA/PAC Regional office.

***System Area Code (SAC) Allotment Scheme
(by country alphabet order and even hexadecimal numbers)***

Table 1 - System Area Codes

SAC (Hexad)	Country/ Geographical Area	Binary Representation	SAC (Hexad)	Country/ Geographical Area	Binary Representation
02	American Samoa	0000 0010	50	Mongolia	0101 0000
04	Australia	0000 0100	52	Myanmar	0101 0010
06	Bangladesh	0000 0110	54	Nauru	0101 0100
08	Bhutan	0000 1000	56	Nepal	0101 0110
10	Brunei Darussalam	0000 1010	58	New Caledonia	0101 1000
12	Cambodia	0001 0010	60	New Zealand	0110 0000
16	China	0001 0110	62	Niue Island	0110 0010
18	Hong Kong, China	0001 1000	64	Pakistan	0110 0100
20	Taibei, China	0010 0000	66	Palau	0110 0110
22	Cook Islands	0010 0010	68	Papua New Guinea	0110 1000
24	DPR. of Korea	0010 0100	72	Philippines	0111 0010
26	Fiji	0010 0110	74	Republic of Korea	0111 0100
28	French Polynesia	0010 1000	76	Samoa	0111 0110
30	India	0011 0000	78	Singapore	0111 1000
32	Indonesia	0011 0010	80	Solomon Islands	1000 0000
34	Japan	0011 0100	82	Sri Lanka	1000 0010
36	Kiribati	0011 0110	84	Thailand	1000 0100
38	Lao PDR.	0011 1000	86	Tonga	1000 0110
40	Macao, China	0100 0000	88	Tuvalu	1000 1000
42	Malaysia	0100 0010	90	United States	1001 0000
44	Maldives	0100 0100	92	Vanuatu	1001 0010
46	Marshall Islands	0100 0110	94	Vietnam	1001 0100
48	Micronesia	0100 1000	96	Wallis Islands	1001 0110

* 14, 70 is intentionally left blank

*System Identification Codes (SIC) Assignment
by country alphabet order*

(Sample Format)

SIC (Decimal)	Radar Data System	Radar Type	Code (Binary)
Radars in Terminal Areas			
001	Location A	PSR/SSR	0000 0001
002	B	PSR/MSSR	0000 0010
003	C	PSR/MSSR	0000 0011
065	D	PSR/MSSR	0100 0001
066	E	PSR/MSSR	0100 0010
Radars in En-Route Airspace			
132	Location F	MSSR	1000 0100
133	G	SSR	1000 0101
134	X	MSSR	1000 0110
135	Y	MSSR	1000 0111
195		SSR	1100 0011
196	Z	SSR	1100 0100
Processing Systems			
228	ATCC - RDPA		1110 0100
229	ATCC - RDPB		1110 0101

BRUNEI DARUSSALAM

	Radar in Terminal Area		
SIC	Radar Data System	Radar Type	Code Binary
1	Brunei Terminal Area Radar	PSR/MSSR	0000 0001

CHINA

SIC (Decimal)	Radar Data Source	Code (Binary)
0 ~127	Reserved for non-civil aviation user	
Flight Information Regions		
128	Beijing FIR	1000 0000
129	Shanghai FIR	1000 0001
130	Shenyang FIR	1000 0010
131	Wuhan FIR	1000 0011
132	Guangzhou FIR	1000 0100
133	Kunming FIR	1000 0101
134	Lanzhou FIR	1000 0110
135	Urumqi FIR	1000 0111
136	Hongkong FIR	1000 1000
137	Taibei FIR	1000 1001
138-143	Reserved	
Air Traffic		
144	Shenyang ACC	1001 0000
145	Harbin ACC	1001 0001
146	Hailar ACC	1001 0010
147	Dalian ACC	1001 0011
148	Beijing ACC	1001 0100
149	Hohhot ACC	1001 0101
150	Taiyuan ACC	1001 0110
151	Shanghai ACC	1001 0111
152	Jinan ACC	1001 1000
153	Hefei ACC	1001 1001
154	Nanchang ACC	1001 1010
155	Xiamen ACC	1001 1011
156	Wuhan ACC	1001 1100
157	Zhengzhou ACC	1001 1101
158	Guangzhou ACC	1001 1110
159	Changsha ACC	1001 1111
160	Nanning ACC	1010 0000
161	Kunming ACC	1010 0001
162	Guiyang ACC	1010 0010
163	Chengdu ACC	1010 0011
164	Xi-an ACC	1010 0100
165	Lanzhou ACC	1010 0101
166	Urumqi ACC	1010 0110
167	Guilin ACC	1010 0111
168	Hongkong ACC	1010 1000
169	Qing Dao ACC	1010 1001
170	Taibei ACC	1010 1010
171-191	Reserved	

CHINA (CONT'D)

Radar Station			
192	Beijing-1	SSR	1100 0000
193	Beijing-2	PSR/SSR	1100 0001
194	Beijing-3	PSR/SSR	1100 0010
195	Tianjin	SSR	1100 0011
196	Taiyuan	SSR	1100 0100
197	Hohhot	SSR	1100 0101
198	Guangzhou-1	PSR/SSR	1100 0110
199	Guangzhou-2	SSR	1100 0111
200	Shenzhen	PSR/SSR	1100 1000
201	Sanya	PSR/SSR	1100 1001
202	Changsha	SSR	1100 1010
203	Enshi	SSR	1100 1011
204	Wuhan	PSR/SSR	1100 1100
205	Zhengzhou -1	PSR/SSR	1100 1101
206	Zhengzhou -2	PSR/SSR	1100 1110
207	Guilin	SSR	1100 1111
208	Nanning	SSR	1101 0000
209	Shantou	SSR	1101 0001
210	Zhuhai	PSR/SSR	1101 0010
211	Haikou	PSR/SSR	1101 0011
212	Kunming	SSR	1101 0100
213	Chengdu	PSR/SSR	1101 0101
214	Guiyang -1	SSR	1101 0110
215	Guiyang -2	PSR/SSR	1101 0111
216	Chongqing	PSR/SSR	1101 1000
217	Shanghai -1	PSR/SSR	1101 1001
218	Shanghai -2	SSR	1101 1010
219	Shanghai -3	PSR	1101 1011
220	Hefei	SSR	1101 1100
221	Fuzhou	SSR	1101 1101
222	Xiamen	PSR/SSR	1101 1110
223	Lianyungang	SSR	1101 1111
224	Nanjing	PSR/SSR	1110 0000
225	Shenyang	PSR/SSR	1110 0001
226	Dalian	PSR/SSR	1110 0010
227	Xi'an	SSR	1110 0011
228	Lanzhou	SSR	1110 0100
229	Nanchang	SSR	1110 0101
230	Qingdao	SSR	1110 0110
231	Jinan	SSR	1110 0111
232	Urumqi	PSR/SSR	1110 1000
233	Harbin	PSR/SSR	1110 1001
234-258	Reserved		

HONG KONG, CHINA

SIC (Decimal)	Radar Data System	Radar type	Code (Binary)
Radars in Terminal Areas			
001	Tai Mo Shan Terminal Area Radar	PSR/MSSR	0000 0001
002	Sha Chau Approach Surveillance Radar	PSR/MSSR	0000 0010
003	Beacon Hill Approach Secondary Surveillance Radar	MSSR	0000 0011
011	Beacon Hill Approach Surveillance	PSR	0000 1011
Radars in En-Route Airspace			
101	Mount Parker Route Secondary Surveillance Radar	MSSR	0110 0101
111	Mount Parker Route surveillance Radar	PSR	0110 1111

MACAO, CHINA

SIC (Decimal)	Radar Data System	Radar type	Code (Binary)
Radars Systems			
001	Coloane Approach Surveillance Radar	PSR/MSSR	1111 0001
002	Reserved for other Radar		
003	Reserved for other Radar		
004	Reserved for other Radar		
005	Reserved for other Radar		

INDONESIA

SIC (Decimal)	Radar Data System	Radar type	Code (Binary)
Terminal areas and en-route airspace			
001	Medan	PRS/SSR	0000 0001
002	Pekanbaru	PSR/SSR	0000 0010
003	Tanjung Pinang	PSR/SSR	0000 0011
004	Palembang	PSR/SSR	0000 0100
005	Jakarta/CGK	PSR/MSSR	0000 0101
006	Pontianak	PSR/SSR	0000 0110
007	Yogyakarta	PSR/MSSR	0000 0111
008	Surabaya	PSR/SSR	0000 1000
009	Makassar	PSR/SSR	0000 1001
010	Benjarmasin	PSR/SSR	0000 1010
011	Balikpapan	PSR/SSR	0000 1011
012	Denpasar	PSR/MSSR	0000 1100
013	Biak	PSR/SSR	0000 1101
En-route airspace			
101	Banda Aceh	SSR	0110 0101
102	Natuna	MSSR	0110 0110
103	Jakarta/HLP	SSR	0110 0111
104	Semarang	SSR	0110 1000
105	Manado	SSR	0110 1001
106	Kendari	SSR	0110 1010
107	Waingapu	SSR	0110 1011
108	Ambon	SSR	0110 1100
Processing systems			
201	Jakarta/CGK		1100 1001
202	Medan		1100 1010
203	Denpasar		1100 1011
204	Makassar		1100 1100
205	Yogyakarta		1100 1101

NEW ZEALAND

SIC (Decimal)	Radar Data System	Radar type	Code (Binary)
Radars Systems			
001	Auckland	PSR	0000 0001
002	Rua-o-te-whenua	SSR	0000 0010
003	Te Weraaiti	SSR	0000 0011
004	Balance	SSR	0000 0100
005	Ohakea	PSR	0000 0101
006	Hawkins Hill	PSR/SSR	0000 0110
007	Mt. Robertson	SSR	0000 0111
008	Christchurch	PSR	0000 1000
009	Cass Peak	SSR	0000 1001

PAPUA NEW GUINEA

SIC (Decimal)	Radar Data System	Radar Type	Code (Binary)
	Radar in Terminal Area	PSR/SSR	000 0001
001	Port Moresby Approach		

REPUBLIC OF KOREA

SIC (Decimal)	Radar Data System	Radar type	Code (Binary)
Radars in Terminal Areas			
001	Kimpo	PSR/MSSR	0000 0001
005	Kimhae	PSR/SSR	0000 0101
010	Cheju	PSR/MSSR	0000 1010
015	Inchon	PSR/MSSR (new installation)	0000 1111
020/025	Reserved for other Radar		
031/050	Reserved for Military Radars		
Radars in En-Route Airspace			
119/138	Reserved for En-Route (Planned)		
Processing Systems			
210	Taegu ACC		1101 0010
215	Kimpo ARTS		1101 0111
220	Kimhae ARTS		1101 1100
225	Cheju ARTS		1110 0001
230	Inchon ARTS		1110 0110
236/255	Reserved for Military ARTS		

SINGAPORE

SIC (Decimal)	Radar Data System	Radar type	Code (Binary)
Radars in Terminal Areas			
001	ASR 1	PSR/MSSR	0000 0001
002	ASR 2	PSR/MSSR	0000 0010
005	LSR	PSR/MSSR	0000 0101
Processing System			
065	ATCC - RDPA		0100 0001
066	ATCC - RDPB		0100 0010

SRI LANKA

SIC (Decimal)	Radar Data System	Radar type	Code (Binary)
Radars in Terminal Areas			
001	Bandaranaike International Airport Colomblo	PSR	0000 0001
Radars in En-Route Airspace			
011	Pidurutalagala	PSR/MSSR	0000 1011
021	Area Control Centre - Ratmalana Airport Colombo		0001 0101
022	Approach Control Centre - Bandaranaike International Airport, Colombo		0001 0110

THAILAND

SIC (Decimal)	Radar Data System	Radar type	Code (Binary)
Radars in Terminal Areas and En-Route Airspace			
001	Donmuang	PSR/MSSR	0000 0001
006	Chiangmai	PSR/MSSR	0000 0110
007	Mae Hong Son	MSSR	0000 0111
012	Ubonratchathani	MSSR	0000 1100
016	Suratthani	PSR	0001 0000
021	Phuket	PSR	0001 0101
026	Hatyai	MSSR	00011010
Processing System			
228	ATCC - RDPA		1110 0100
229	ATCC - RDPB		1110 0101

VIETNAM

SIC (Decimal)	Radar Data System	Radar type	Code (Binary)
Radars in Terminal Areas and En-Route Airspace			
001	Noi Bai/Ha Noi (Radar Data head 1)	PSR/MSSR	0000 0001
002	Son Tra/Da Nang	PSR/MSSR	0000 0010
003	Tan son Nhat/Ho chi Minh	PSR/MSSR	0000 0011
Radars in En-Route Airspace			
131	Noi Bai/Ha Noi (Radar Data Head 2)	PSR/SSR	1000 0011
132	Vinh	MSSR	1000 0100
133	Qui Nhon	MSSR	1000 0101
134	Ca Mau	MSSR	1000 0110
Processing Systems			
221	ATCC - RDP Noi Bai/Ha Noi		1101 1101
222	ATCC - RDP Tan Son Nhat/Ho Chi Minh		1101 1110