INTERNATIONAL CIVIL AVAITATION ORGANIZTIONS
ASIA AND PACIFIC REGIONAL OFFICE

CATALOGUE OF ASIA AND PACIFIC FLIGHT INPECTION AND FLIGHT VALIDATION SERVICE PROVIDERS

Tenth Edition – April 2018

FOREWORD

The Catalogue of Asia and Pacific Flight Inspection and Flight Validation Service Providers contains information on Service Providers that are currently operating in the Asia and Pacific region. The purpose of this catalogue is to disseminate information to States which do not have their own Flight Inspection and Flight Validation Service Providers and are interested in making use of Service Providers that have capacity available to conduct flight tests of their radio navigation aids and Flight Validations for instrument flight procedures designed based on Performance Based Navigation (PBN) Concept.

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AUSTRALIA

1. Name of the Service Provider : AeroPearl Pty Ltd
   Address: 3 Melaleuca St, Brisbane Airport, QLD, 4008
   Tel: +61 7 3860 0600
   Fax: +61 7 3860 0664
   E-mail: admin@aeropearl.com.au

2. Type(s) and number of flight testing aircraft available, associated charges and conditions:

Type of Aircraft & Aircraft Available		**Flight Time Charges per hour (USD)**		**Other co-ordinations**	**Used for Validation/ Inspection** (V/I)
		Positioning Flights	**Check Flights**		
Beach 350	3	On request	On request		V & I
Learjet 35A	1	On request	On request		I (SSR/ADS-B only)

3. Flight testing capability and estimated flight time:

Radio Navigation Aids	**Flight Check Capability (Y/N)**	**Estimated Flight Check Time (Hours)***		**Type of Flight Check System**
		Routine	**Commissioning**	
VOR	Y	1 to 4	2 to 10	Automatic
DME	Y	1 to 4	4 to 8	Automatic
MLS	N			
ILS CAT I	Y	2 to 8	3 to 20	Automatic
ILS CAT II	Y	2 to 8	3 to 20	Automatic
ILS CAT III	Y	2 to 8	3 to 20	Automatic
PAR	Y	1 to 2	1 to 4	Automatic
SAR	Y	1	1 to 2	Automatic
SRE	Y	1	1 to 2	Automatic
NDB/LOC	Y	0.5 to 2	2 to 8	Automatic
Marker Beacon	Y	0.5	0.5 to 2	Automatic
PAPI	Y	0.5	0.5 to 2	Automatic
VASIS	Y	0.5	0.5 to 2	Automatic
RF Interference	Y	varies	varies	Automatic
GNSS interference	Y	varies	varies	Manual *(See item 8.)*
SSR	Y	0.5 to 15	2 to 40	Automatic
PSR	Y	1 to 2	1 to 4	Automatic
TACAN	Y	4 to 8	4 to 12	Automatic
** Estimated time depends on requirements and locations of ground equipment*				

4. Flight validation capability for instrument flight procedures including PBN Navigation Specification

Type of Procedures	Flight Validation Capability (Y/N)	Estimated Flight Validation Time (Hours)		Type of Flight Validation System
		Initial	Periodic Review	
RNP APCH (LNAV)	**Y**	.5	.5	Automatic
RNP APCH (LNAV/VNAV)	**Y**	.5	.5	Automatic
RNP APCH (LPV)*	**N**	-	-	-
SBAS CAT I*	**N**	-	-	-
GBAS CAT I	**Y**	.5	.5	Automatic
GBAS CAT II/III	**Y**	.5	.5	Automatic
RNAV/RNP SID	**Y**	.5	.5	Automatic
RNAV/RNP STAR	**Y**	.5	.5	Automatic
** No SBAS in Australia - these procedures are not implemented at this time*.				

5. Type of Flight Management System which is used for flight data coding:

   - Rockwell Collins FMS-3000, Universal UNS-1LW
   - For flight validation: Thales B737-800, GE FMC 10.8A

6. Location and Type of flight simulators which is used for flyability check, if available:

   - For flight inspection? Rockwell Collins Pro Line 21, Full Motion, Queensland, Australia
   - For flight validation: Brisbane, B737-800

7. Charges per hour (USD, tax excluded) for simulation, including flight crew:

   - On request
   - For flight validation: Approx USD$1000/hour. This does not include custom coding of instrument flight procedures

8. GPS interference detection capability, if equipped:

   - During flight inspection: GPS Receiver and Spectrum Analyser combined with downward-facing GPS antenna. Data from GPS receiver is monitored/analysed and Spectrum Analyser continuously scanning looking for interference.

9. Languages possibly used by flight testing team:

   - English

10. Estimated annual flight time available to assist other Administrations for testing radio navigation aids:

    - Variable, on request.

11. Advance notice expected before delivery of the service:

    - Variable, on request.

12. State Regulation(s) commonly complied with when delivering flight inspection services:

    - ICAO Doc 8071
    - ICAO Annex 10
    - Airservices Australia Flight Inspection Requirements

13. State Regulation(s) commonly complied with when delivering flight validation services:

    - Flight Validation conducted in accordance with CASR Part 173 Manual of Standards.

14. Provide a link for further information, if any:

    - www.aeropearl.com.au
    - https://www.legislation.gov.au/Details/F2017C00201

15. Other information:

PEOPLE'S REPUBLIC OF CHINA

1. Name of the Service Provider : Flight Inspection Center of CAAC
   Address: No.18 North Huoyun Road, Beijing Capital International Airport
   Beijing, China
   Tel: +86 10 6454 3296
   Fax: +86 10 6454 3293
   E-mail: yangxy@chinacfi.net

2. Type(s) and number of flight testing aircraft available, associated charges and conditions:

Type of Aircraft & Aircraft Available		**Flight Time Charges per hour (USD)**		**Other co-ordinations**	**Used for Validation/ Inspection** (V/I)
		Positioning Flights	**Check Flights**		
Beach KingAir 350	3	Negotiable	Negotiable	Negotiable	I
Citation 560XLS	5	Negotiable	Negotiable	Negotiable	V/I
Citation 680	3	Negotiable	Negotiable	Negotiable	V/I
Gulfstream 450	1	Negotiable	Negotiable	Negotiable	V

3. Flight testing capability and estimated flight time:

Radio Navigation Aids	**Flight Check Capability (Y/N)**	**Estimated Flight Check Time (Hours)**		**Type of Flight Check System**
		Routine	**Commissioning**	
VOR	Y	4-5	6–7	Automatic
DME	Y	In relation to VOR	In relation to VOR	Automatic
MLS	N			
ILS CAT I	Y	5	7	Automatic
ILS CAT II	Y	5	7	Automatic
ILS CAT III	Y	5	7	Automatic
PAR	Y	As required	3-4	Automatic
SAR	Y	As required	3-4	Automatic
SRE	N			
NDB/LOC	Y	3	4	Automatic
Marker Beacon	Y	In relation to ILS	In relation to ILS	Automatic
PAPI	Y	40 min	1	Manual
VASIS	Y			Manual
RF Interference	Y	As required	As required	Automatic
GNSS interference	*Note*	As Required	As required	*(See item 8.)*
Note - SNR for each satellite is available				

4. Flight validation capability for instrument flight procedures including PBN Navigation Specification

Type of Procedures	Flight Validation Capability (Y/N)	Estimated Flight Validation Time (Hours)		Type of Flight Validation System
		Initial	Periodic Review	
RNP APCH (LNAV)	Y	10 min.	As required	Automatic
RNP APCH (LNAV/VNAV)	Y	10 min.	As required	Automatic
RNP APCH (LPV)	Y	10 min.	As required	Automatic
SBAS CAT I	N			
GBAS CAT I	Y	6-10	As required	Automatic
GBAS CAT II/III	Y	6-10	As required	Automatic
RNAV/RNP SID	Y	15-20 min.	As required	Automatic
RNAV/RNP STAR	Y	15-20 min.	As required	Automatic

5. Type of Flight Management System which is used for flight data coding:

   - Honeywell NZ 7.0 (G450 & CE680), Honeywell NZ 6.0 (CE560)

6. Location and Type of flight simulators which is used for flyability check, if available:

   - Type D, Shanghai, China

7. Charges per hour (USD, tax excluded) for simulation, including flight crew:

   - USD4100

8. GPS interference detection capability, if equipped:

   - Not Available

9. Languages possibly used by flight testing team:

   - Chinese, English

10. Estimated annual flight time available to assist other Administrations for testing radio navigation aids:

    - Negotiable

11. Advance notice expected before delivery of the service:

    - 3 months

12. State Regulation(s) commonly complied with when delivering flight inspection services:

    - ICAO Doc. 8071 & Annex 10
    - CCAR85, CCAR 86

13. State Regulation(s) commonly complied with when delivering flight validation services:

- ICAO Doc. 9906

14. Provide a link for further information, if any:

- www.chinacfi.net

15. Other information:

- All flight inspection systems are certified by ISO/IEC 17025

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FRANCE

1. Name of the service provider: DGAC/DSNA/DTI/CEV
   Address*:* 1, avenue du Dr Maurice Grynfogel - CS 53584 F – 31 035
   TOULOUSE CEDEX 1 - FRANCE

   Contact : Mr Joel Faucon
   Tel: +33 (0) 562 145 143
   Fax: +33 (0) 562 145 401
   E-mail: joel.faucon@aviation-civile.gouv.fr

2. Type(s) and number of flight testing aircraft available, associated charges and conditions:

Type of Aircraft & Aircraft Available		**Flight Time Charges per hour (USD)**		**Other co-ordinations**	**Used for Validation/ Inspection** (V/I)
		Positioning Flights	**Check Flights**		
PA31-350 located in French Polynesia (NTAA) – range: South Pacific islands	1	on demand-rates depend on location	On demand	Portable GNSS FIS for helicopter FV or GNSS RFI detection	V/ I

3. Flight testing capability and estimated flight time:

Radio Navigation Aids	**Flight Check Capability (Y/N)**	**Estimated Flight Check Time (Hours)**		**Type of Flight Check System**
		Routine	**Commissioning**	
VOR	Y	1-2h	3-4h dependent upon number of routes	Automatic
DME	Y	0.5h-1h or along with VOR/ILS	1h or along with VOR/ILS	Automatic
MLS	N			
ILS CAT I	Y	3h	6-9h	Automatic – RTK DGPS
ILS CAT II	Y	4h	6-10h	Automatic – RTK DGPS
ILS CAT III	Y	4h	6-10h	Automatic – RTK DGPS
PAR	N			
SAR	N			
SRE	N			
NDB/LOC	N			
Marker Beacon	Y	0.2h or along with ILS	0.4h or along with ILS	Automatic – RTK DGPS
PAPI	Y	0.3h or along with ILS	0.5h	Automatic
VASIS	Y	0.3h or along with	0.5h	Automatic

Radio Navigation	Flight Check Capability	Estimated Flight Check Time (Hours)	Type of Flight Check
		ILS	
RF Interference	Y	Dependent upon RFI/ spectrum monitoring can be performed during navaid flight check	Automatic
GNSS interference	Y	Dependent upon RFI/ spectrum monitoring can be performed during PBN procedure flight validation	Automatic *(See item 8.)*

4. Flight validation capability for instrument flight procedures including PBN Navigation Specification

Type of Procedures	Flight Validation Capability (Y/N)	Estimated Flight Validation Time (Hours)		Type of Flight Validation System
		Initial	Periodic Review	
RNP APCH (LNAV)	Y	From 1h to 2h Dependent on nb of legs and on nb of minima on the chart		Automatic, procedure can be precoded in Garmin GTN (extra fees)
RNP APCH (LNAV/VNAV)	Y			
RNP APCH (LPV)	Y			
SBAS CAT I	Y			
GBAS CAT I	N			
GBAS CAT II/III	N			
RNAV/RNP SID	Y	Dependent on nb of legs		Automatic, procedure can be precoded in Garmin GTN (extra fees)
RNAV/RNP STAR	Y	Dependent on nb of legs		Automatic, procedure can be precoded in Garmin GTN (extra fees)

5. Type of Flight Management System which is used for flight data coding:

   - Garmin GTN 750/650

6. Location and Type of flight simulators which is used for flyability check, if available:

   - None

7. Charges per hour (USD, tax excluded) for simulation, including flight crew:

   - N/A

8. GPS interference detection capability, if equipped:

    - Rohde&Schwarz EM100 or EB200 receiver connected to GPS +LNA antenna, driven by a specialized RFI detection software (CGX AiRFInDeR) and GPS measurements impact assessment

9. Languages possibly used by flight testing team:

    - French or English.

10. Estimated annual flight time available to assist other Administrations for testing radio navigation aids:

    - 50h, could be increased.

11. Advance notice expected before delivery of the service:

    - 3 months.

12. State Regulation(s) commonly complied with when delivering flight inspection services:

    - ICAO doc 8071 vol 1 and 2,
    - French regulation : Arrêté du 10 avril 2015 relatif à la mise en service et au suivi des aides radio à la navigation NOR: DEVA1507970A.

13. State Regulation(s) commonly complied with when delivering flight validation services:

    - ICAO doc 9906 vol5.
    - French regulation : Arrêté du 4 octobre 2017 relatif à l'établissement des procédures de vol aux instruments au bénéfice des aéronefs évoluant selon les règles applicables à la circulation aérienne générale NOR: TRAA1721722A

14. Provide a link for further information, if any:

    - *https://www.ecologique-solidaire.gouv.fr/en/performance-based-navigation-0*

15. Other information:

    - Type of Flight inspection System: SAFRAN Carnac30.
    - DGAC/DSNA/DTI/CEV is the Flight Inspection Service Provider for France mainland and its oversea territories with 2 aircraft based in French Polynesia and French Caribbean. Holds also annual contracts since several years in Belgium, Tunisia, Lebanon. Performed more than 250 RNP APCH flight inspection and validation since 10 years in France among which more than 200 LPVs, and 2 RNP AR.
    - DGAC/DSNA/DTI/CEV can provide support to APAC states to perform PBN procedure ground and flight validation including onboard interferences detection (with possible FIS portable system lease)

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INDIA

1. Name of the Service Provider: Airports Authority of India
   Address: Executive Director,
   Flight Inspection Unit
   Airport Authority of India,
   Safdarjung Airport, New Delhi 110003
   Tel: +91 (11) 24611077
   Fax: +91 (11) 24697211
   E-mail: edfiu@aai.aero

   Or

   Address: General Manager,
   Business Development
   C-Block, Rajiv Gandhi Bhawan, New Delhi 110003
   Tel: +91 (11) 24629347
   Fax: +91 (11) 24610841
   E-mail: bd@aai.aero

2. Type(s) and number of flight testing aircraft available, associated charges and conditions:

Type of Aircraft & Aircraft Available		**Flight Time Charges per hour (USD)**		**Other co-ordinations**	**Used for Validation/ Inspection** (V/I)
		Positioning Flights	**Check Flights**		
SKA B-350	1	Negotiable	Negotiable		V/I
Dornier DO-228	2	Negotiable	Negotiable		V/I

3. Flight testing capability and estimated flight time:

Radio Navigation Aids	**Flight Check Capability (Y/N)**	**Estimated Flight Check Time (Hours)**		**Type of Flight Check System**
		Routine	**Commissioning**	
VOR	Y	2.5	5.0	Automatic
DME	*Note 1*			
MLS	N			
ILS CAT I	Y	3.5	5.5	Automatic
ILS CAT II	Y	3.5	5.5	Automatic
ILS CAT III	Y	3.5	5.5	Automatic
PAR	Y	*Note 2*		
SAR	Y			
SRE	Y			
NDB/LOC	Y	1.5	3.0	Automatic

Radio Navigation	Flight Check Capability	Estimated Flight Check Time (Hours)		Type of Flight Check
Marker Beacon	*Note 3*			
PAPI	Y	0.5	1.5	Manual
VASIS	Y	0.5	1.5	Manual
RF Interference	Y			Manual
GNSS interference	Y			*(See item 8.)*
Note 1. The estimated flight check time is included in the DVOR or other facility which DME support. *Note 2. The estimate for flight check time of PAR/SSR/SRE will depend on the user requirement.* *Note 3. The requirement of the flight check time of Marker Beacon is included in flight check time of ILS.*				

4. Flight validation capability for instrument flight procedures including PBN Navigation Specification

Type of Procedures	Flight Validation Capability (Y/N)	Estimated Flight Validation Time (Hours)		Type of Flight Validation System
		Initial	Periodic Review	
RNP APCH (LNAV)	Y	*Note*		Automatic
RNP APCH (LNAV/VNAV)	Y			Automatic
RNP APCH (LPV)	Y			Automatic
SBAS CAT I	Y			Automatic
GBAS CAT I	Y	1.5	0.5	Automatic
GBAS CAT II/III	-	-	-	-
RNAV/RNP SID	Y	*Note*		Automatic
RNAV/RNP STAR	Y			Automatic
Note - Estimated flight validation time depends upon the user Requirement.				

5. Type of Flight Management System which is used for flight data coding:

   - FMS DATA TYPE 7 DATABASE “L7 EURASPAC”

6. Location and Type of flight simulators which is used for flyability check, if available:

   - N/A

7. Charges per hour (USD, tax excluded) for simulation, including flight crew:

   - N/A

8. GPS interference detection capability, if equipped:

   - RD 460 (BY AERODATA GERMANY) / HOMING method.

9. Languages possibly used by flight testing team:

    - English

10. Estimated annual flight time available to assist other Administrations for testing radio navigation aids:

    - AS PER AGREEMENT

11. Advance notice expected before delivery of the service:

    - AS PER AGREEMENT

12. State Regulation(s) commonly complied with when delivering flight inspection services:

    - ICAO documents

13. State Regulation(s) commonly complied with when delivering flight validation services:

    - ICAO documents.

14. Provide a link for further information, if any:

    - www.aai.aero/en/services/consultancy-services-offered-aai

15. Other information:

    - Point of contact for prior coordination.
      Executive Director,
      Flight Inspection Unit,
      Airports Authority of India
      Safdarjung Airport,
      New Delhi - 110003
      Tel: +91 (11) 24611077
      Fax: +91 (11) 24697211
      E-mail: edfiu@aai.aero

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INDONESIA

1. Name of Service Provider: Indonesian Flight Inspection Service Provider
(BALAI BESAR KALIBRASI FASILITAS PENERBANGAN)
Address: Jln. Raya STPI – Curug, Legok, Tangerang, Banten, Indonesia, 15820
Tel: +62-21 5473086, 5472943, 5472942
Fax: +62-21 5473086
E-mail:

2. Type(s) and number of flight testing aircraft available, associated charges and conditions:

Type of Aircraft & Aircraft Available		**Flight Time Charges per hour (USD)**		**Other co-ordinations**	**Used for Validation/ Inspection** (V/I)
		Positioning Flights	**Check Flights**		
Kingair B350i	2	Negotiable	4,800		V/I
Kingair B200	4	Negotiable	4,600		V/I
Hawker 900XP	1	Negotiable	5,500		V
Bell 429	2	Negotiable	4,500		V/I

3. Flight testing capability and estimated flight time:

Radio Navigation Aids	**Flight Check Capability (Y/N)**	**Estimated Flight Check Time (Hours)**		**Type of Flight Check System**
		Routine	**Commissioning**	
VOR	Y	2.5	7	Automatic
DME	Y	2	2	Automatic
MLS	N	-	-	
ILS CAT I	Y	4-5	15	Automatic
ILS CAT II	N	-	-	
ILS CAT III	N	-	-	
PAR	N	-	-	
SAR	Y	-	20	Automatic
SRE	N	-	-	
NDB/LOC	Y	1	3	Automatic
Marker Beacon	Y	0.5	0.5	Automatic
PAPI	Y	1	1.5	Automatic
VASIS	Y	1	1.5	Automatic
RF Interference	Y	0.5	-	Automatic
GNSS interference				*(See item 8.)*

4. Flight validation capability for instrument flight procedures including PBN Navigation Specification

Type of Procedures	Flight Validation Capability (Y/N)	Estimated Flight Validation Time (Hours)		Type of Flight Validation System
		Initial	Periodic Review	
RNP APCH (LNAV)	Y			Automatic
RNP APCH (LNAV/VNAV)	N			
RNP APCH (LPV)	Y			Automatic
SBAS CAT I	N			
GBAS CAT I	Y			Automatic
GBAS CAT II/III	N			
RNAV/RNP SID	Y			Automatic
RNAV/RNP STAR	Y			Automatic

5. Type of Flight Management System which is used for flight data coding:

   - Rockwell Collins ProLine 21 (FMS-3000)

6. Location and Type of flight simulators which is used for flyability check, if available:

   - Full Flight Simulator King Air B200GT/350i for flyability check, location in base office

7. Charges per hour (USD, tax excluded) for simulation, including flight crew:

   - USD 566.50 cost for using simulator including flight crew

8. GPS interference detection capability, if equipped:

   - Not equipped

9. Languages possibly used by flight testing team:

   - Flight Validation/Inspection: Bahasa Indonesia, English
   - Report: English

10. Estimated annual flight time available to assist other Administrations for testing radio navigation aids:

    - Provide available 2000 hours/negotiable that can be used for other Administrations

11. Advance notice expected before delivery of the service:

    - Time for prior coordination required, 7 days

12. State Regulation(s) commonly complied with when delivering flight inspection services:

    - Advisory Circular CASR Part 171-5 from DGCA Indonesia applied to the flight inspection

13. State Regulation(s) commonly complied with when delivering flight validation services:

    - Advisory Circular CASR Part 171-5 from DGCA Indonesia applied to the flight validation

14. Provide a link for further information, if any:

    - www.flightcalibration-indonesia.com

15. Other information:

    - CASR 171 certification/approval type of flight inspection/validation system from DGCA Indonesia

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JAPAN

1. Name of the Service Provider:
   Ministry of Land, Infrastructure, Transport, and Tourism
   Japan Civil Aviation Bureau
   Address: 2-1-3 Kasumigaseki Chiyoda-ku, Japan, zip code 100-8918
   Tel: +81(3)5253 8753
   Fax: +81(3)5253 1664
   E-mail:

2. Type(s) and number of flight testing aircraft available, associated charges and conditions:

Type of Aircraft & Aircraft Available		**Flight Time Charges per hour (USD)**		**Other co-ordinations**	**Used for Validation/ Inspection** (V/I)
		Positioning Flights	**Check Flights**		
CJ4	5	Negotiable			V/I
DHC-8-315	1				V/I

3. Flight testing capability and estimated flight time:

Radio Navigation Aids	**Flight Check Capability (Y/N)**	**Estimated Flight Check Time (Hours)***		**Type of Flight Check System**
		Routine	**Commissioning**	
VOR	Y	2.5	15-20	Automatic
DME	Y	2.5	15-20	Automatic
MLS	N	-	-	-
ILS CAT I	Y	2.0	30-40	Automatic
ILS CAT II	Y	3.0	45-55	Automatic
ILS CAT III	Y	3.0	45-55	Automatic
PAR	Y	1.5	2.0	Automatic
SAR	Y	2.5	20-30	Automatic
SRE	Y	4.0	30-40	Automatic
NDB	N	-	-	
Marker Beacon	Y	0.5	1.5	Automatic
PAPI	Y	1.0	1.5	Automatic /Manual
VASIS	Y	2.0	3.0	Manual
RF Interference	N	-	-	-
GNSS interference	N	-	-	*(See item 8)*

** The list of the Flight Inspection time are for the case where it was carried out in Japan. The Flight Inspection time change by various elements. For example used regulations, a number of air-routes, air traffic density, and so on.*

4. Flight validation capability for instrument flight procedures including PBN Navigation Specification

Type of Procedures	Flight Validation Capability (Y/N)	Estimated Flight Validation Time (Hours)		Type of Flight Validation System
		Initial	Periodic Review	
RNP APCH (LNAV)	Y	Depend on the design of Instrument Flight procedures		Manual
RNP APCH (LNAV/VNAV)	Y			Manual
RNP APCH (LPV)	N			-
SBAS CAT I	N			-
GBAS CAT I	Y			Manual
GBAS CAT II/III	N			-
RNAV/RNP SID	Y			Manual
RNAV/RNP STAR	Y			Manual

5. Type of Flight Management System which is used for flight data coding:

   - CJ4 : FMS-3000 (Rockwell Collins)
   - DHC-8-315 : UNS-1Ew (Universal)

6. Location and Type of flight simulators which is used for flyability check, if available:

   - Flight Training Device for B737NG 400XR (CAE)
   - Flight Inspection Center at CHUBU CENTRAIR International Airport

7. Charges per hour (USD, tax excluded) for simulation, including flight crew:

   - Negotiable

8. GPS interference detection capability, if equipped:

   - Not equipped

9. Languages possibly used by flight testing team:

   - Japanese

10. Estimated annual flight time available to assist other Administrations for testing radio navigation aids:

    - Negotiable.

11. Advance notice expected before delivery of the service:

    - 4 months

12. State Regulation(s) commonly complied with when delivering flight inspection services:

    - Depend on the requests.

13. State Regulation(s) commonly complied with when delivering flight validation services:

    - Depend on the requests.

14. Provide a link for further information, if any:

    - No WEB site

15. Other information:

    - Nil

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MALAYSIA

1. Name of the Service Provider:
   Flight Calibration Division, Department of Civil Aviation, Malaysia
   Address: DCA Hanger, LTSAAS, 47200 Subang, Selangor, Malaysia
   Tel: +603- 78313004 / 3005
   Fax: +603- 78469510
   E-mail: abdulali@dca.gov.my

2. Type(s) and number of flight testing aircraft available, associated charges and conditions:

Type of Aircraft & Aircraft Available		**Flight Time Charges per hour (USD)**		**Other co-ordinations**	**Used for Validation/ Inspection** (V/I)
		Positioning Flights	**Check Flights**		
Learjet 60	2	2,500	5,000		I

3. Flight testing capability and estimated flight time:

Radio Navigation Aids	**Flight Check Capability (Y/N)**	**Estimated Flight Check Time (Hours)**		**Type of Flight Check System**
		Routine*	**Commissioning***	
VOR	Y	1.5	4	Automatic
DME	Y	1	1	Automatic
MLS	N	-	-	-
ILS CAT I	Y	2.5	10	Automatic
ILS CAT II	Y	2.5	10	Automatic
ILS CAT III	N	-	-	-
PAR	Y	2.5	10	Automatic
SAR	Y	2	3	-
SRE	N	-	-	-
NDB/LOC	Y	1	2	Automatic
Marker Beacon	Y	1	1	Automatic
PAPI	Y	2**	3**	Automatic
VASIS	Y	2	3	Automatic
RF Interference	N	-	-	-
GNSS interference	N	-	-	*(See item 8.)*

* *Excluding Ferry Flight*
** *PAPI Both Ends*

4. Flight validation capability for instrument flight procedures including PBN Navigation Specification

Type of Procedures	Flight Validation Capability (Y/N)	Estimated Flight Validation Time (Hours)		Type of Flight Validation System
		Initial	Periodic Review	
RNP APCH (LNAV)	Y			
RNP APCH (LNAV/VNAV)	N			
RNP APCH (LPV)	N			
SBAS CAT I	N			
GBAS CAT I	N			
GBAS CAT II/III	N			
RNAV/RNP SID	Y	14	14	
RNAV/RNP STAR	Y	14	14	

5. Type of Flight Management System which is used for flight data coding:

   (Not provided)

6. Location and Type of flight simulators which is used for flyability check, if available:

   - N/A

7. Charges per hour (USD, tax excluded) for simulation, including flight crew:

   - N/A

8. GPS interference detection capability, if equipped:

   - N/A

9. Languages possibly used by flight testing team:

   - English

10. Estimated annual flight time available to assist other Administrations for testing radio navigation aids:

    - N/A

11. Advance notice expected before delivery of the service:

    - 3 months

12. State Regulation(s) commonly complied with when delivering flight inspection services:

    i) ICAO Doc. 8071 Manual on Testing of Radio Navigation Aids Vol. I and II
    ii) Annex 10 – Radio Navigation Aids (Vol. I)

13. State Regulation(s) commonly complied with when delivering flight validation services:

    i) ICAO Doc. 8071 Vol. II

14. Provide a link for further information, if any:

    - N/A

15. Other information:

    - Point of Contact: Capt. Abdul Rahman Bin Ali (Phone: +603- 78313004/3005)

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MONGOLIA

1. Name of the Service Provider:
   Flight Inspection and Procedure Design Services of Civil Aviation Authority of Mongolia
   Address: Mongolia, Ulaanbaatar-34, Buyant-Ukhaa 17120,
   Chinggis Khaan international airport, P.O.B 82
   Tel: +976-11-285080, +976-11-285506
   Fax: +976-70049889
   E-mail: fipds@mcaa.gov.mn

2. Type(s) and number of flight testing aircraft available, associated charges and conditions:

Type of Aircraft & Aircraft Available		**Flight Time Charges per hour (USD)**		**Other co-ordinations**	**Used for Validation/ Inspection** (V/I)
		Positioning Flights	**Check Flights**		
Beach C90	1	Negotiable	Negotiable	Tomas Air LLC	V/I
C208B	1	Negotiable	Negotiable	Geosan LLC	V/I
F-50	2	Negotiable	Negotiable	Aeromongolia LLC Hunnu Air LLC	V/I
ATR-72	2	Negotiable	Negotiable	Hunnu Air LLC	V/I
AN-24	-	Negotiable	Negotiable	Customer airlines	V/I
SAAB 340B	-	Negotiable	Negotiable	Customer airlines	V/I
PC-6	-	Negotiable	Negotiable	Customer airlines	V/I

3. Flight testing capability and estimated flight time:

Radio Navigation Aids	**Flight Check Capability (Y/N)**	**Estimated Flight Check Time (Hours)**		**Type of Flight Check System**
		Routine	**Commissioning**	
VOR	Y	4	8	Semi-Automatic
DME	Y	Combined with VOR or ILS		Semi-Automatic
MLS	N	-	-	-
ILS CAT I	Y	6	12	Semi-Automatic
ILS CAT II	Y	6	12	Semi-Automatic
ILS CAT III	N	-	-	-
PAR	N	-	-	-
SAR	Y	Dependent upon nature and extent of checks required		Manual
SRE	Y	Dependent upon nature and extent of checks required		Manual

Radio Navigation	Flight Check Capability	Estimated Flight Check Time (Hours)		Type of Flight Check
NDB/LOC	Y	0.75/per RWY approach	3	Semi-Automatic
Marker Beacon	Y	0.75/per RWY approach or route check		Semi-Automatic
PAPI	Y	2	3	Semi-Automatic
VASIS	Y	4	6	Semi-Automatic
RF Interference	Y	6	8	Semi-Automatic
GNSS interference	N	-	-	*(See item 8.)*
DME/DME route	Y	Route distance		Semi-automatic

4. Flight validation capability for instrument flight procedures including PBN Navigation Specification

Type of Procedures	Flight Validation Capability (Y/N)	Estimated Flight Validation Time (Hours)		Type of Flight Validation System
		Initial	Periodic Review	
RNP APCH (LNAV)	Y	5	4	Manual
RNP APCH (LNAV/VNAV)	N	-	-	-
RNP APCH (LPV)	N	-	-	-
SBAS CAT I	N	-	-	-
GBAS CAT I	N	-	-	-
GBAS CAT II/III	N	-	-	-
RNAV/RNP SID	Y	3	2	Manual
RNAV/RNP STAR	Y	3	2	Manual
Conventional IFP	Y	2	1	Manual

5. Type of Flight Management System which is used for flight data coding:

   - Garmin 450 FMS
   - Garmin 950 FMS

6. Location and Type of flight simulators which is used for flyability check, if available:

   - Currently we do not have this kind of service. For more information, please contact by e-mail.

7. Charges per hour (USD, tax excluded) for simulation, including flight crew:

   - Currently we do not have this kind of service. For more information, please contact by e-mail.

8. GPS interference detection capability, if equipped:

- Currently we do not have this kind of service. For more information, please contact by e-mail.

9. Languages possibly used by flight testing team:

   - English, Russian.

10. Estimated annual flight time available to assist other Administrations for testing radio navigation aids:

    - At least 300-400 hours of flights are available annually

11. Advance notice expected before delivery of the service:

    - Advanced notice is expected before 45 days for special or periodic inspection service. For validation service or commissioning inspection service, it is expected before 2 months.

12. State Regulation(s) commonly complied with when delivering flight inspection services:

    - In accordance with ICAO requirements.

13. State Regulation(s) commonly complied with when delivering flight validation services:

    - In accordance with ICAO requirements.

14. Provide a link for further information, if any:

    - Website: http://fipds.mcaa.gov.mn
    - Facebook: http://www.facebook.com/fipdsmgl/

15. Other information:

    - We can provide two fully functional teams at any time with minimal response time and flexibility at an affordable price.
    - Our light weight and portable flight inspection system is able to be installed in most medium, light aircraft with minor modification.
    - In 2014, FIPDS is registered as a flight inspection service provider in the International Committee for Airspace Standards and Calibration.
    - In 2014, flight inspection service is provided in some civil airports of the Islamic Republic of Iran.
    - Since 2016, we have been providing a photometric measurement service for PAPI system in accordance with the requirements of ICAO Annex 14.
    - For prior coordination, please contact with Mr. Gansukh Khurelsukh (e-mail: gansukh@mcaa.gov.mn; telephone number: +976-11-285506).

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MYANMAR

1. Name of the Service Provider: Department of Civil Aviation, Myanmar

Address: Mr. Yan Naung Soe
Director (Flight Standard Division)
Department of Civil Aviation
DCA H/Q Building, Yangon International Airport
Mingaladon, 11021, Yangon, Myanmar
Tel: +95 (1) 533004
Fax: +95 (1) 533016
E-mail: dfsd@dca.gov.mn

2. Type(s) and number of flight testing aircraft available, associated charges and conditions:

Type of Aircraft & Aircraft Available		**Flight Time Charges per hour (USD)**		**Other co-ordinations**	**Used for Validation/ Inspection** (V/I)
		Positioning Flights	**Check Flights**		
Beechcraft 1900D	1	1900	1900	Myanmar National Airlines	Inspection

3. Flight testing capability and estimated flight time:

Radio Navigation Aids	**Flight Check Capability (Y/N)**	**Estimated Flight Check Time (Hours)**		**Type of Flight Check System**
		Routine	**Commissioning**	
VOR	Y	4	6	Automatic
DME	Y	Combined with VOR/ILS		Automatic
MLS	N			
ILS CAT I	Y	5	10	Automatic
ILS CAT II	Y	5	10	Automatic
ILS CAT III	Y	5	10	Automatic
PAR	N			
SAR	N			
SRE	N			
NDB/LOC	Y	3	5	Automatic
Marker Beacon	Y	1	2	Automatic
PAPI	Y	2	5	Automatic
VASIS	N			
RF Interference	N			
GNSS interference	N			*(See item 8.)*

4. Flight validation capability for instrument flight procedures including PBN Navigation Specification

Type of Procedures	Flight Validation Capability (Y/N)	Estimated Flight Validation Time (Hours)		Type of Flight Validation System
		Initial	Periodic Review	
RNP APCH (LNAV)	N			
RNP APCH (LNAV/VNAV)	N			
RNP APCH (LPV)	N			
SBAS CAT I	N			
GBAS CAT I	N			
GBAS CAT II/III	N			
RNAV/RNP SID	N			
RNAV/RNP STAR	N			

5. Type of Flight Management System which is used for flight data coding:

   - None

6. Location and Type of flight simulators which is used for flyability check, if available:

   - None

7. Charges per hour (USD, tax excluded) for simulation, including flight crew:

   - N/A

8. GPS interference detection capability, if equipped:

   - None

9. Languages possibly used by flight testing team:

   - Myanmar and English.

10. Estimated annual flight time available to assist other Administrations for testing radio navigation aids:

    - *None*

11. Advance notice expected before delivery of the service:

    - *N/A*

12. State Regulation(s) commonly complied with when delivering flight inspection services:

    - *MCAR Part 5, Section 9, Vol I.*

13. *State Regulation(s) commonly complied with when delivering flight validation services:*

    - *N/A*

14. *Provide a link for further information, if any:*

    - *http://www.dca.gov.mm*

15. *Other information:*

    - *Beechcraft 1900D is equipped with Norwegian Special Mission (NSM) Automatic Flight Inspection System (UNIFIS-3000).*

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NEW ZEALAND

1. Name of the Service Provider: Airways Corporation of New Zealand,
   Flight Inspection Services
   New Zealand

   Tel: +644 471 1888
   Fax: +644 471 0395
   E-mail: info@airways.co.nz

2. Type(s) and number of flight testing aircraft available, associated charges and conditions:

Type of Aircraft & Aircraft Available		**Flight Time Charges per hour (USD)**		**Other co-ordinations**	**Used for Validation/ Inspection** (V/I)
		Positioning Flights	**Check Flights**		
PA42-1000	2	Negotiable	Negotiable		V/I

3. Flight testing capability and estimated flight time:

Radio Navigation Aids	**Flight Check Capability (Y/N)**	**Estimated Flight Check Time (Hours)**		**Type of Flight Check System**
		Routine	**Commissioning**	
VOR	Y	**Note 1*	**Note 1*	Automatic
DME	Y	**Note 1*	**Note 1*	Automatic
MLS	N			
ILS CAT I	Y	**Note 1*	**Note 1*	Automatic
ILS CAT II	Y	**Note 1*	**Note 1*	Automatic
ILS CAT III	Y	**Note 1*	**Note 1*	Automatic
PAR	Y	**Note 1*	**Note 1*	Automatic
SAR	Y	**Note 1*	**Note 1*	Automatic
SRE	Y	**Note 1*	**Note 1*	Automatic
NDB/LOC	Y	**Note 1*	**Note 1*	Automatic
Marker Beacon	Y	**Note 1*	**Note 1*	Automatic
PAPI	Y	**Note 1*	**Note 1*	Automatic
VASIS	Y	**Note 1*	**Note 1*	Automatic
RF Interference	Y	**Note 1*	**Note 1*	Manual
GNSS interference	Y	**Note 1*	**Note 1*	Manual *(See item 8.)*

**Note 1 - Estimated times depends on traffic density, safety risk analysis, airspace restrictions, operational limits, weather conditions and the flight inspection aircraft issued priority assignment. Airways aim is to work with the customer to establish the priorities assigned to their operation.*

4. Flight validation capability for instrument flight procedures including PBN Navigation Specification

Type of Procedures	Flight Validation Capability (Y/N)	Estimated Flight Validation Time (Hours)		Type of Flight Validation System
		Initial	Periodic Review	
RNP APCH (LNAV)	Y	*Note 2	*Note 2	Automatic
RNP APCH (LNAV/VNAV)	Y	*Note 2	*Note 2	Automatic
RNP APCH (LPV)	N			
SBAS CAT I	N			
GBAS CAT I	N			
GBAS CAT II/III	N			
RNAV/RNP SID	Y	*Note 2	*Note 2	Automatic
RNAV/RNP STAR	Y	*Note 2	*Note 2	Automatic
**Note 2 – This depends on if the design is generated internally within by Airways Instrument Procedure Design, or an outside design organisation. Factors such as data integrity, obstacle verification, design complexity and procedure risk profile all have an influence on validation initial and periodic review flight times.*				

5. Type of Flight Management System which is used for flight data coding:

   - Airfield Technologies AT940DG, AT920DG, Airways Systems, Parker Hannifin Corporation GNSS Inspection Unit.

6. Location and Type of flight simulators which is used for flyability check, if available:

   - Commercially Sensitive

7. Charges per hour (USD, tax excluded) for simulation, including flight crew:

   - Commercially Sensitive

8. GPS interference detection capability, if equipped:

   - CMA180, R&S PR 100 GPS L1,L2,L5, Agilent E4402B.

9. Languages possibly used by flight testing team:

   - English

10. Estimated annual flight time available to assist other Administrations for testing radio navigation aids:

    - Negotiable

11. Advance notice expected before delivery of the service:

    - Negotiable

12. State Regulation(s) commonly complied with when delivering flight inspection services:

    - New Zealand Civil Aviation Rule Part 171.

13. State Regulation(s) commonly complied with when delivering flight validation services:

    - New Zealand Civil Aviation Rule Part 173.

14. Provide a link for further information, if any:

    - www.airways.co.nz

15. Other information:

    Airways is New Zealand's air navigation service provider. Our staff of 780 deliver air navigation and air traffic management consultancy and training services throughout New Zealand and in over 65 countries.

    Provision of service is certified under the following parts:

    - air traffic control – NZCAR PART 172
    - air navigation infrastructure – NZCAR PART 171
    - flight path management - NZCAR PART 173
    - technical and engineering services – NZCAR PART 171
    - design airspace requirements – NZCAR PART 173
    - flight maps and charts - NZCAR PART 175
    - air traffic control training – NZCAR PART 141 & 172
    - flight inspection services.- NZCAR PART 171/173

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ISLAMIC REPUBLIC OF PAKISTAN

1. Name of the Service Provider: Flight Inspection Unit of Pakistan CAA
   Address: Headquarters Civil Aviation Authority
   Jinnah International Airport, Terminal-1
   Karachi, Pakistan
   Tel: +9221 99242762
   Fax: +9221 99242695
   E-mail: raiz.chisshti@caapakistan.com.pk

2. Type(s) and number of flight testing aircraft available, associated charges and conditions:

Type of Aircraft & Aircraft Available		**Flight Time Charges per hour (USD)**		**Other co-ordinations**	**Used for Validation/ Inspection** (V/I)
		Positioning Flights	**Check Flights**		
Beach 200	2	Flight Inspection Unit of Pakistan CAA will provide a Financial Quote in response to any request.		-	V/I

3. Flight testing capability and estimated flight time:

Radio Navigation Aids	**Flight Check Capability (Y/N)**	**Estimated Flight Check Time (Hours)**		**Type of Flight Check System**
		Routine	**Commissioning**	
VOR	Y	2.0	6.0	Aero-Data Automatic Flight Inspection System
DME	Y	1.0	2.0	
MLS	Y	** Note*		
ILS CAT I	Y	3.5	10.0 – 12.0	
ILS CAT II	Y	4.5	12.0 – 15.0	
ILS CAT III	Y	4.5	12.0 – 15.0	
PAR	Y	3.0	6.0	
SAR	Y	** Note*		
SRE	Y			
NDB/LOC	Y	1.5	6.0	
Marker Beacon	Y	1.5	2.0 – 3.0	
PAPI	Y	1.5	2.0 – 3.0	
VASIS	Y	1.5	2.0 – 3.0	
RF Interference	Y	** Note*		
GNSS interference	Y			*(See item 8.)*
** Note: Depending upon Scope and Requirement.*				

4. Flight validation capability for instrument flight procedures including PBN Navigation Specification

Type of Procedures	Flight Validation Capability (Y/N)	Estimated Flight Validation Time (Hours)		Type of Flight Validation System
		Initial	Periodic Review	
RNP APCH (LNAV)	Y	5.0 – 6.0	5.0 – 6.0	Aero-Data Automatic Flight Inspection System
RNP APCH (LNAV/VNAV)	Y	5.0 – 6.0	5.0 – 6.0	
RNP APCH (LPV)	Y	5.0 – 6.0	5.0 – 6.0	
SBAS CAT I	Y	5.0 – 6.0	5.0 – 6.0	
GBAS CAT I	Y	5.0 – 6.0	5.0 – 6.0	
GBAS CAT II/III	Y	5.0 – 6.0	5.0 – 6.0	
RNAV/RNP SID	Y	Actual Flight Time Blocks Off to Blocks On will be charged		
RNAV/RNP STAR	Y			

5. Type of Flight Management System which is used for flight data coding:

   - Rockwell Collins FMS 3000

6. Location and Type of flight simulators which is used for flyability check, if available:

   - None

7. Charges per hour (USD, tax excluded) for simulation, including flight crew:

   - N/A

8. GPS interference detection capability, if equipped:

   - AeroData AD-120 Automatic Flight Inspection System

9. Languages possibly used by flight testing team:

   - English

10. Estimated annual flight time available to assist other Administrations for testing radio navigation aids:

    - Approx. 300 – 400 Hours

11. Advance notice expected before delivery of the service:

    - 4 weeks

12. State Regulation(s) commonly complied with when delivering flight inspection services:

    - ANO-002-ARTS-2.0 & ICAO Doc 8071

13. State Regulation(s) commonly complied with when delivering flight validation services:

- ICAO Doc 9906 (Vol. 5)

14. Provide a link for further information, if any:

- www.caapakistan.com.pk

15. Other information:

i) Flight Inspection Unit of Pakistan CAA has been providing flight inspection & Validation services in the Asia Pacific & Middle East region to various countries such as Bangladesh, Sri Lanka, Nepal, Maldives, Vietnam, Cambodia, Iran, Bahrain, UAE, Kingdom of Saudi Arabia, Qatar, Oman, and Eretria.

ii) Long-term Flight Inspection contracts are offered at Special rates, depending upon length of contract and quantum of work. All local taxes, landing, housing and ground handling charges are to be borne by the host State/ Authority.

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THE PHILIPPINES

1. Name of the Service Provider:
   Flight Inspection & Calibration Group, Civil Aviation Authority of the Philippines
   Address: FICG. CAAP Hangar, Andrews Avenue, Pasay City, Metro Manila
   Tel: 0632 994 2334
   Fax: 0632 851 3914
   E-mail: ficg@caap.gov.ph

2. Type(s) and number of flight testing aircraft available, associated charges and conditions:

Type of Aircraft & Aircraft Available		**Flight Time Charges per hour (USD)**		**Other co-ordinations**	**Used for Validation/ Inspection** (V/I)
		Positioning Flights	**Check Flights**		
Learjet 31A	1	Negotiable	Negotiable		V/I
Pilatus PC12	1	Negotiable	Negotiable		V/I

3. Flight testing capability and estimated flight time:

Radio Navigation Aids	**Flight Check Capability (Y/N)**	**Estimated Flight Check Time (Hours)**		**Type of Flight Check System**
		Routine	**Commissioning**	
VOR	Y	2	6	Automatic
DME	Y	Along with VOR or ILS	Along with VOR or ILS	
MLS	N			
ILS CAT I	Y	4	12	
ILS CAT II	Y	4	12	
ILS CAT III	N			
PAR	N			
SAR	Y	4	12	
SRE	Y	4	12	
NDB/LOC	Y	1	5	
Marker Beacon	Y	Along with ILS	Along with ILS	
PAPI	Y	1	2	
VASIS	Y	1	2	
RF Interference	Y			
GNSS interference	Y			*(See item 8.)*

4. Flight validation capability for instrument flight procedures including PBN Navigation Specification

Type of Procedures	Flight Validation Capability (Y/N)	Estimated Flight Validation Time (Hours)		Type of Flight Validation System
		Initial	Periodic Review	
RNP APCH (LNAV)	Y	2	1	Manual
RNP APCH (LNAV/VNAV)	Y	3	1	
RNP APCH (LPV)	Y	3	1	
SBAS CAT I	N			
GBAS CAT I	N			
GBAS CAT II/III	N			
RNAV/RNP SID	Y	2	1	
RNAV/RNP STAR	Y	2	1	

5. Type of Flight Management System which is used for flight data coding:

   - Apex Primus/ UNS – 1E

6. Location and Type of flight simulators which is used for flyability check, if available:

   - Not Available

7. Charges per hour (USD, tax excluded) for simulation, including flight crew:

   - Not Applicable

8. GPS interference detection capability, if equipped:

   - Rhode & Schwarz RFI / DF

9. Languages possibly used by flight testing team:

   - English.

10. Estimated annual flight time available to assist other Administrations for testing radio navigation aids:

    - Negotiable

11. Advance notice expected before delivery of the service:

    - 3 months

12. State Regulation(s) commonly complied with when delivering flight inspection services:

    - Philippine Civil Aviation Regulations for Air Navigation Services Part 6, 9, 10

13. State Regulation(s) commonly complied with when delivering flight validation services:

    - Philippine Civil Aviation Regulations for Air Navigation Services Part 16

14. Provide a link for further information, if any:

    - www.caap.gov.ph

15. Other information:

    - ficg@caap.gov.ph

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REPUBLIC OF KOREA

1. Name of the Service Provider:
   Flight Inspection Center, Ministry of Land, Infrastructure and Transport
   Address: Gimpo International Airport, 84 Haneul-Gil, Gangseo-Gu, Seoul 07505,
   Republic of Korea
   Tel: +82 (2) 2660 2162, 2167
   Fax: +82(2) 2662 0881
   E-mail: airjeong@korea.kr or fic99@korea.kr

2. Type(s) and number of flight testing aircraft available, associated charges and conditions:

Type of Aircraft & Aircraft Available		**Flight Time Charges per hour (USD)**		**Other co-ordinations**	**Used for Validation/ Inspection** (V/I)
		Positioning Flights	**Check Flights**		
CL 601-3R	1	Negotiable	2,787		V/I
Hawker 750	1	Negotiable	2,787		V/I

3. Flight testing capability and estimated flight time:

Radio Navigation Aids	**Flight Check Capability (Y/N)**	**Estimated Flight Check Time (Hours)**		**Type of Flight Check System**
		Routine	**Commissioning**	
VOR	Y	2	4	Automatic
DME	Y	1	2	Automatic
MLS	N	N/A	N/A	N/A
ILS CAT I	Y	2	12	Automatic
ILS CAT II	Y	2	12	Automatic
ILS CAT III	Y	2	12	Automatic
PAR	Y	1	4	Automatic
SAR	Y	1	4	Automatic
SRE	Y	1	4	Automatic
NDB/LOC	Y	0.5	2	Automatic
Marker Beacon	Y	-	-	Automatic
PAPI	Y	0.5	4	Automatic
VASIS	Y	0.5	4	Automatic
RF Interference	Y	-	-	Automatic
GNSS interference	Y	-	-	*(See item 8.)*

4. Flight validation capability for instrument flight procedures including PBN Navigation Specification

Type of Procedures	Flight Validation Capability (Y/N)	Estimated Flight Validation Time (Hours)		Type of Flight Validation System
		Initial	Periodic Review	
RNP APCH (LNAV)	Y	2	0.5	Automatic
RNP APCH (LNAV/VNAV)	Y	2	0.5	Automatic
RNP APCH (LPV)	Y	2	1	Automatic
SBAS CAT I	Y	2	1	Automatic
GBAS CAT I	Y	10	1	Automatic
GBAS CAT II/III	Y	10	1	Automatic
RNAV/RNP SID	Y	2	0.5	Automatic
RNAV/RNP STAR	Y	2	0.5	Automatic

5. Type of Flight Management System which is used for flight data coding:

   - CL601-3R: UNS-1
   - Hawker 750: FMS-6000

6. Location and Type of flight simulators which is used for flyability check, if available:

   - N/A

7. Charges per hour (USD, tax excluded) for simulation, including flight crew:

   - N/A

8. GPS interference detection capability, if equipped:

   - Rohde & Schwarz FSV7, Cubic 4400 with Aerodata package.

9. Languages possibly used by flight testing team:

   - Korea, English.

10. Estimated annual flight time available to assist other Administrations for testing radio navigation aids:

    - 100 hours / Negotiable

11. Advance notice expected before delivery of the service:

    - 2-3 months

12. State Regulation(s) commonly complied with when delivering flight inspection services:

    - Korea Act, ICAO DOC 8071, FAA Order 8200.1

13. State Regulation(s) commonly complied with when delivering flight validation services:

    - ICAO and FAA related Documents.

14. Provide a link for further information, if any:

    - Under construction

15. Other information:

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THAILAND

1. Name of the Service Provider:
   International Business Service Department
   Aeronautical Radio of Thailand Limited
   Address: 102 Ngamduplee, Tungmahamek, G.P.O Box 535, Bangkok 10120
   Tel: +66 817349242
   Fax: +66 22859565
   E-mail: bs@aerothai.co,th
   mana.wa@aerothai.co.th

2. Type(s) and number of flight testing aircraft available, associated charges and conditions:

Type of Aircraft & Aircraft Available		**Flight Time Charges per hour (USD)**		**Other co-ordinations**	**Used for Validation/ Inspection** (V/I)
		Positioning Flights	**Check Flights**		
King Air B200	1	Negotiation			I
King Air B300 (KA350)*	2				I/V
** One of B300 will be equipped with Automatic Flight Inspection System within the first quarter of year 2019.*					

3. Flight testing capability and estimated flight time:

Radio Navigation Aids	**Flight Check Capability (Y/N)**	**Estimated Flight Check Time (Hours)**		**Type of Flight Check System**
		Routine	**Commissioning**	
VOR	Y	3	Depend on condition of facility	Selectable between AFIS and Semi-AFIS
DME	Y	Combined with VOR or ILS		
MLS	N	-	-	-
ILS CAT I	Y	5	Depend on condition of facility under inspection	Selectable between AFIS and Semi-AFIS
ILS CAT II	Y	5		
ILS CAT III	Y	5		
PAR	N	-	-	-
SAR	N	-	-	-
SRE	Y	4	Depend on condition of facility under inspection	Selectable between AFIS and Semi-AFIS
NDB/LOC	Y	2		
Marker Beacon	Y	Combined with ILS		
PAPI	Y	2 - 4	Depend on condition of facility under inspection	Selectable among AFIS, Semi-AFIS and Manual
VASIS	N	-	-	-

Radio Navigation	Flight Check Capability	Estimated Flight Check Time (Hours)		Type of Flight Check
RF Interference	Y	Depended on interference situation		Utilized AFIS associated with Spectrum Analyzer
GNSS interference	N	-	-	*(See item 8.)*

4. Flight validation capability for instrument flight procedures including PBN Navigation Specification

Type of Procedures	Flight Validation Capability (Y/N)	Estimated Flight Validation Time (Hours)		Type of Flight Validation System
		Initial	Periodic Review	
RNP APCH (LNAV)	Y	Depended on number of leg(s) and waypoint(s)		AFIS
RNP APCH (LNAV/VNAV)	Y			
RNP APCH (LPV)	N	-	-	-
SBAS CAT I	N	-	-	-
GBAS CAT I	N	-	-	-
GBAS CAT II/III	N	-	-	-
RNAV/RNP SID	Y	Depended on number of waypoints and legs of procedure need to be validated		AFIS
RNAV/RNP STAR	Y			

5. Type of Flight Management System which is used for flight data coding:

   - Rockwell Collins FMS 3000

6. Location and Type of flight simulators which is used for flyability check, if available:

   - N/A

7. Charges per hour (USD, tax excluded) for simulation, including flight crew:

   - N/A

8. GPS interference detection capability, if equipped:

   - Spectrum Analyzer, ROHDE & SCHWARZ Model FSV30

9. Languages possibly used by flight testing team:

   - English
   - Thai.

10. Estimated annual flight time available to assist other Administrations for testing radio navigation aids:

- Approximately 150 hrs.

11. Advance notice expected before delivery of the service:

    - 60 days

12. State Regulation(s) commonly complied with when delivering flight inspection services:

    - AEROTHAI's Flight Inspection procedures and criteria are complied with ICAO and Civil Aviation Authority of Thailand (CAAT). However, FAA Standard can be utilized/provided as well.

13. State Regulation(s) commonly complied with when delivering flight validation services:

    - Flight Validation procedure and criteria complied with ICAO

14. Provide a link for further information, if any:

    -

15. Other information:

    - Flight Inspection / Validation service and WGS-84 survey has been delivered to Lao People's Democratic Republic, Kingdom of Cambodia, Republic of the Union of Myanmar, Federal Democratic Republic of Nepal, Kingdom of Bhutan, and Democratic Socialist Republic of Sri Lanka.
    - The scope of work, prices, flight inspection hour(s) and terms of conditions can be optimized by directly discussion.
    - The accuracy of flight inspection also relates to Navaids facility's coordination (WGS-84). The precise WGS-84 should be provided to AEROTHAI or can be supplied by AEROTHAI's WGS-84 survey service as optional.

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UNITED STATES OF AMERICA

1. Name of the Service Provider: Federal Aviation Administration, AJW-33
   Address: 6500 S. MacArthur Blvd,
   Oklahoma City, OK 73169
   Tel: 405-954-9780
   Fax: 405-954-2834
   E-mail: Bob.Stuckert@faa.gov

2. Type(s) and number of flight testing aircraft available, associated charges and conditions:

Type of Aircraft & Aircraft Available		**Flight Time Charges per hour (USD)**		**Other co-ordinations**	**Used for Validation/ Inspection** (V/I)
		Positioning Flights	**Check Flights**		
Challenger 600 Series	6	3,273	3,273		V/I

3. Flight testing capability and estimated flight time:

Radio Navigation Aids	**Flight Check Capability (Y/N)**	**Estimated Flight Check Time (Hours)**		**Type of Flight Check System**
		Routine	**Commissioning**	
VOR	Y	2 + 0.2/SIAP	8	Automatic
DME	Y	-	3	Automatic
MLS	Y	2	6	Automatic
ILS CAT I	Y	1.5	7	Automatic
ILS CAT II	Y	1.5	13	Automatic
ILS CAT III	Y	1.5	13	Automatic
PAR	Y	1.5	5	Automatic
SAR	Y	1	6	Automatic
SRE	Y	-	11	Automatic
NDB/LOC	Y	0.7	2	Automatic
Marker Beacon	Y	0.1	0.3	Automatic
PAPI	Y	0.5	1.5	Automatic
VASIS	Y	0.5	1.5	Automatic
RF Interference	N			
GNSS interference	Y	2	-	Manual *(See item 8.)*

4. Flight validation capability for instrument flight procedures including PBN Navigation Specification

Type of Procedures	Flight Validation Capability (Y/N)	Estimated Flight Validation Time (Hours)		Type of Flight Validation System
		Initial	Periodic Review	
RNP APCH (LNAV)	Y	1.5	0.5	Automatic
RNP APCH (LNAV/VNAV)	Y	1.5	0.5	Automatic
RNP APCH (LPV)	Y	1.5	0.5	Automatic
SBAS CAT I	Y	1.5	0.5	Automatic
GBAS CAT I	N			
GBAS CAT II/III	N			
RNAV/RNP SID	Y	1	-	Automatic
RNAV/RNP STAR	Y	1	-	Automatic

5. Type of Flight Management System which is used for flight data coding:

   - Universal UNS-1F and Rockwell Collins FMS-5000

6. Location and Type of flight simulators which is used for flyability check, if available:

   - Oklahoma City, OK, Boeing 737-800 and Airbus A300

7. Charges per hour (USD, tax excluded) for simulation, including flight crew:

   - No additional cost, if FAA is inspecting the procedure.

8. GPS interference detection capability, if equipped:

   - Cubic DF-4400

9. Languages possibly used by flight testing team:

   - English

10. Estimated annual flight time available to assist other Administrations for testing radio navigation aids:

    - Negotiable

11. Advance notice expected before delivery of the service:

    - 60 days

12. State Regulation(s) commonly complied with when delivering flight inspection services:

    - FAA Order 8200.1 and ICAO Doc 8071

13. State Regulation(s) commonly complied with when delivering flight validation services:

    - FAA Order 8200.1 and ICAO Doc 9906

14. Provide a link for further information, if any:

    - https://www.faa.gov/air_traffic/flight_info/avn/

15. Other information:

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Abbreviations and Acronyms

AFIS	Automatic Flight Inspection System
DF	Direction Finder / Direction Finding
DME	Distance Measuring Equipment
FMS	Flight Management System
GBAS	Ground Based Augmentation System
GNSS	Global Navigation Satellite System
GPS	Global Positioning System
ILS	Instrument Landing System
LNAV/VNAV	Lateral Navigation / Vertical Navigation
LOC	Localizer
LPV	Localizer Performance with Vertical Guidance
MLS	Microwave Landing System
NDB	Non Directional Beacon
PAPI	Precision Approach Path Indicator
PAR	Precision Approach Radar
RF	Radio Frequency
RFI	Radio Frequency Interference
RNP APCH	Required Navigation Performance Approach
SAR	Surveillance Approach Radar
SBAS	Satellite Based Augmentation System
SID	Standard Instrument Departure
SRE	Surveillance Radar Element
STAR	Standard Instrument Arrival
VASIS	Visual Approach Slope Indicator System
VOR	VHF Omni Directional Radio Range