



WP/05

BOBCAT Operational Updates

BOBCAT



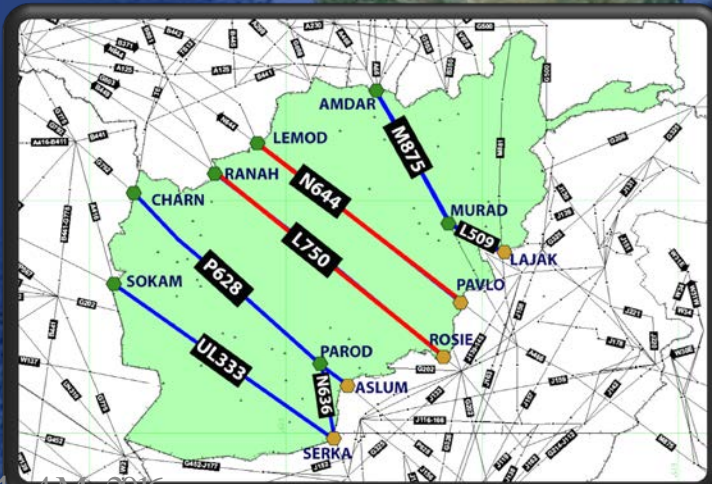
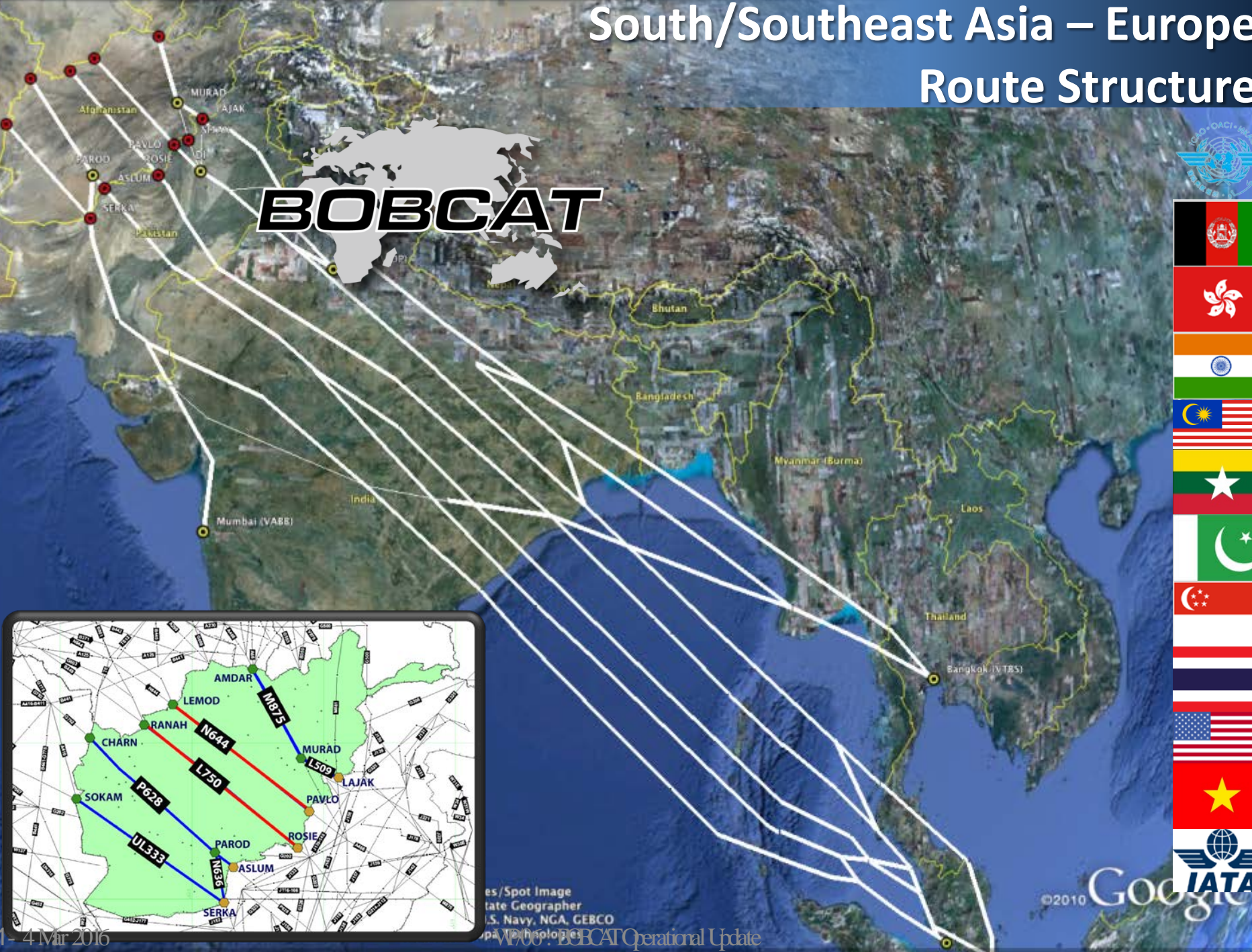
ATFM/SG/6
6 – 10 Jun 2016
Bangkok, Thailand



- Introduction
- Traffic Sample Data & Post-Operational Analysis
- BOBCAT – A-CDM Linkage and 10-minute Cut-off Time Slot Allocation performance
- Addressing of Flight Movement Message
- Preferred Flight Levels
- Departure Punctuality
- Afghanistan Entry Compliance
- ATFM Delay

South/Southeast Asia – Europe Route Structure

BOBCAT



es/Spot Image
ate Geographer
S. Navy, NGA, GEBCO
pa 2010

©2010 Google

1-4 Mar 2016

WFOO BOBCAT Operational Update

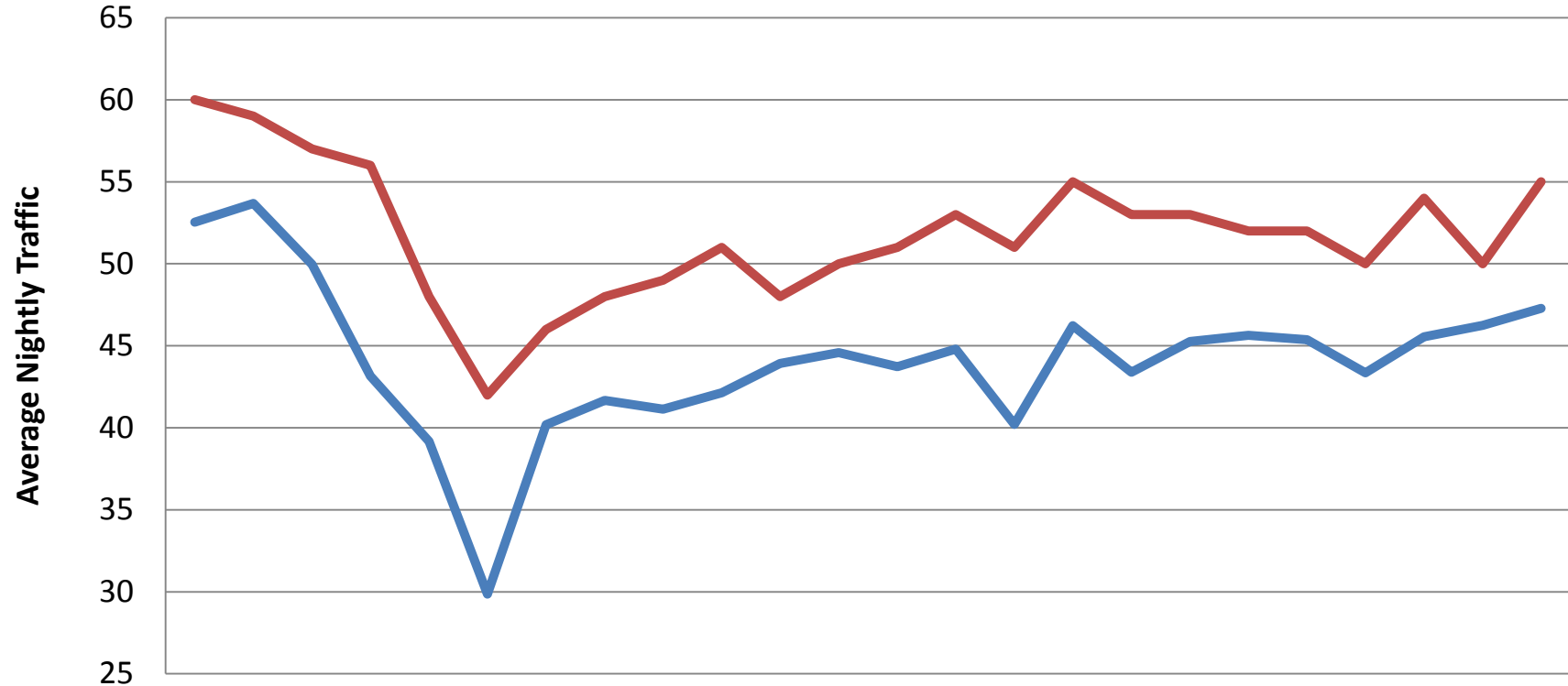
21°16'31.77" N 83°43'22.17" E elev 282 m

Eye alt 5121.36 km

BOBCAT Traffic Demand



BOBCAT Traffic Demand from Slot Request 1 Apr 2014 - 31 Mar 2016



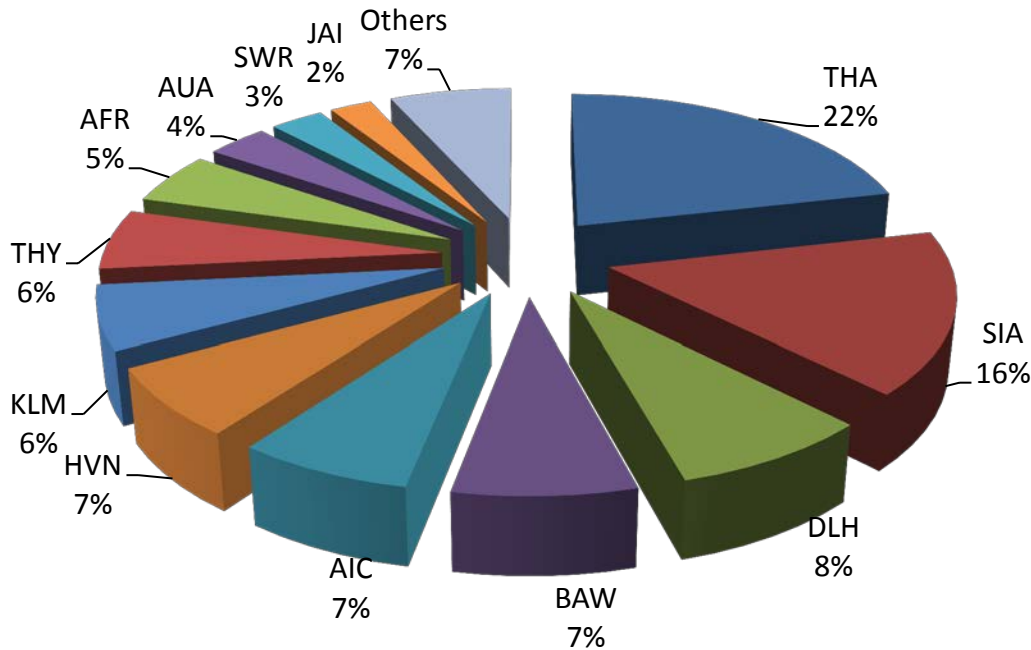
	Apr 14	May 14	Jun 14	Jul 14	Aug 14	Sep 14	Oct 14	Nov 14	Dec 14	Jan 15	Feb 15	Mar 15	Apr 15	May 15	Jun 15	Jul 15	Aug 15	Sep 15	Oct 15	Nov 15	Dec 15	Jan 16	Feb 16	Mar 16
Average	53	54	50	43	39	30	40	42	41	42	44	45	44	45	40	46	43	45	46	45	43	46	46	47
Peak	60	59	57	56	48	42	46	48	49	51	48	50	51	53	51	55	53	53	52	52	50	54	50	55



Traffic Distribution: Airlines



BOBCAT Airline Participation 1 Apr 2014 - 31 Mar 2016



Total Airline Participation: 61 Airlines

Other Airlines

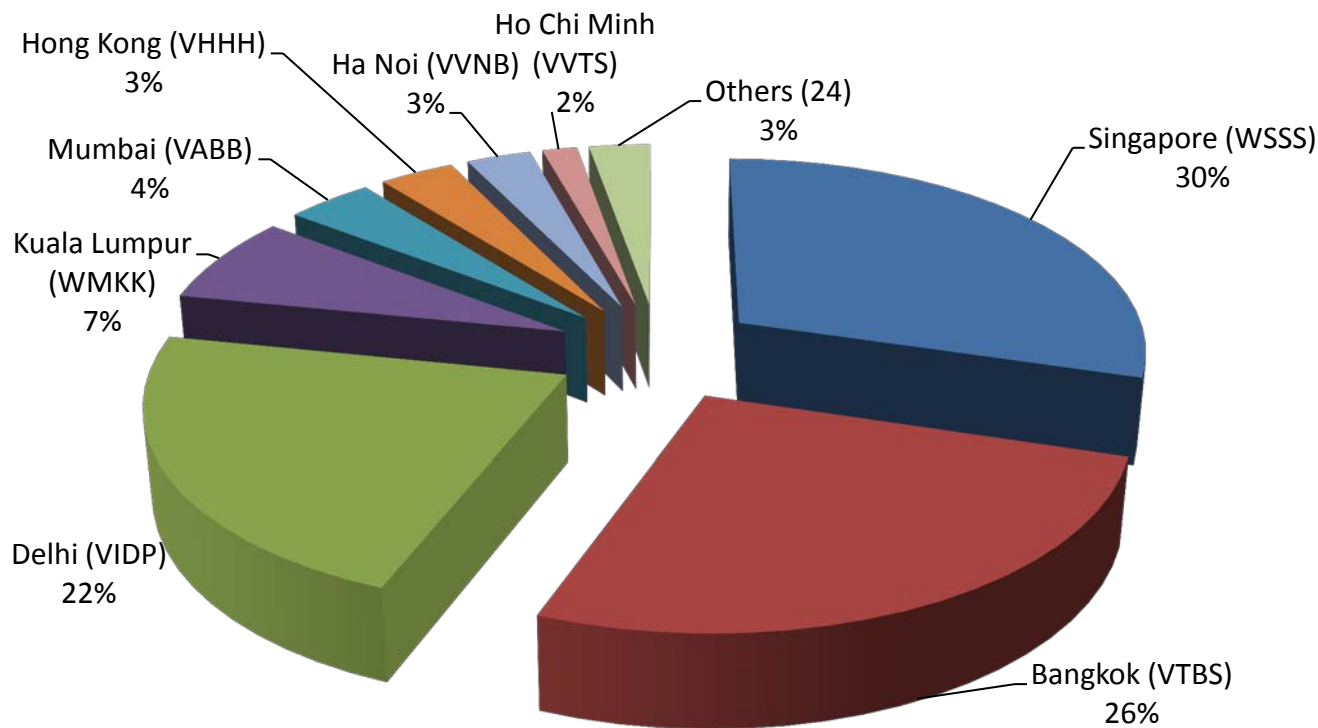
- Finn Air (FIN)
- Uzbekistan Airways (UZB)
- Malaysia Airlines (MAS)
- Cathay Pacific (CPA)
- Volga (VDA)
- CargoLux (CLX)
- Transaero (TSO)
- Air Canada (ACA)
- China Airlines (CAL)
- Aerologic (BOX)

and 39 Other GA and Aircraft Operators





BOBCAT Slot Request by Departure Airport 1 April 2014 - 31 March 2016

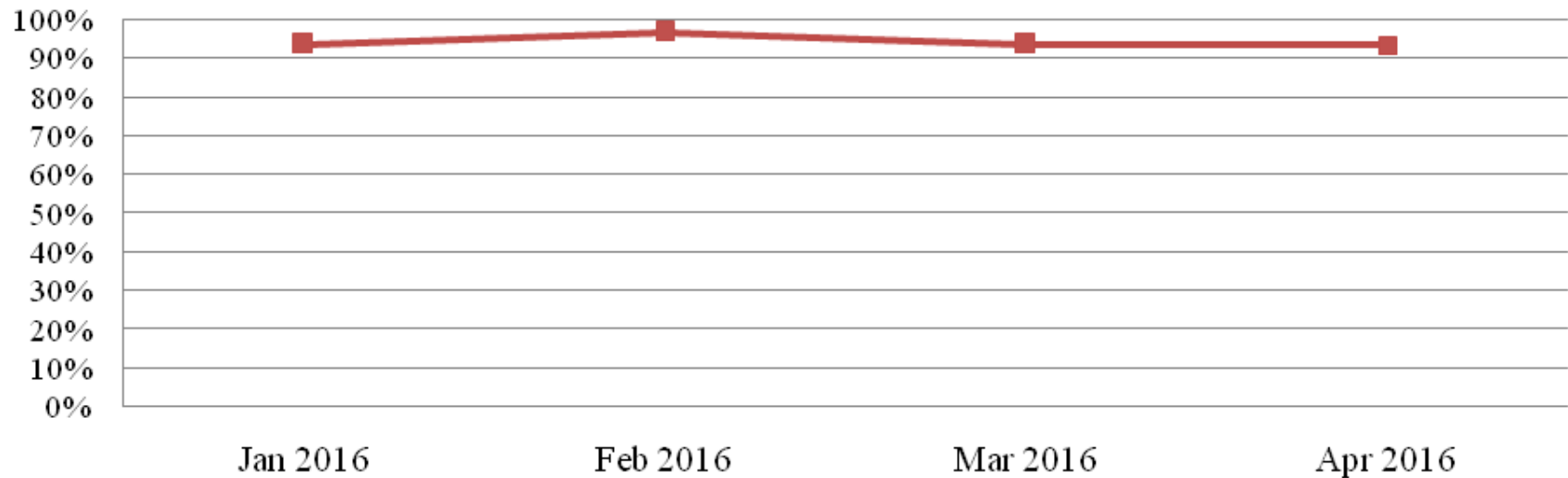




- **A-CDM adoption**
- **A-CDM flight plan requirement**
- **Cut-off time allocation timing**

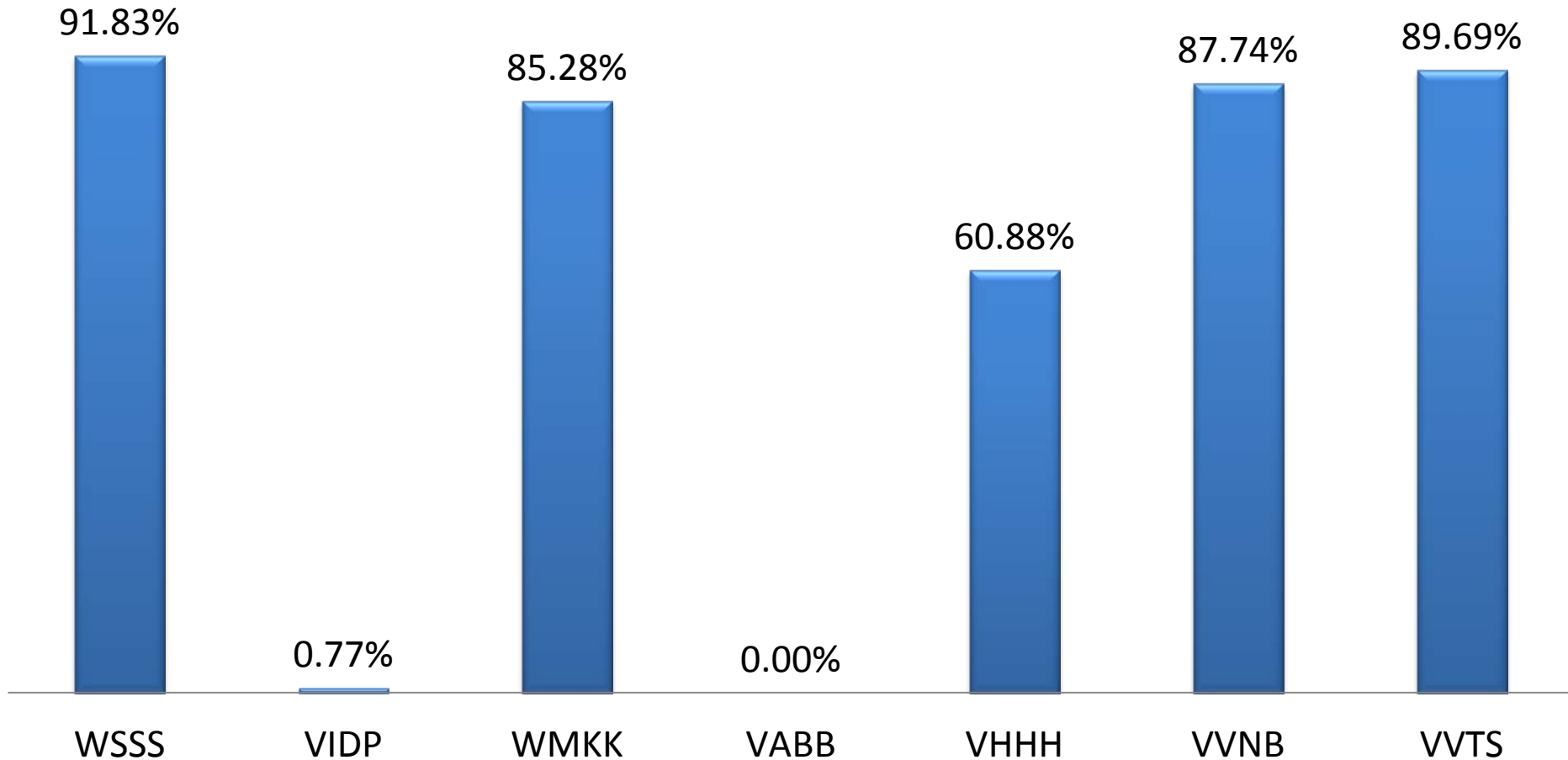


10-Minute Cut-Off Time Slot Allocation Performance





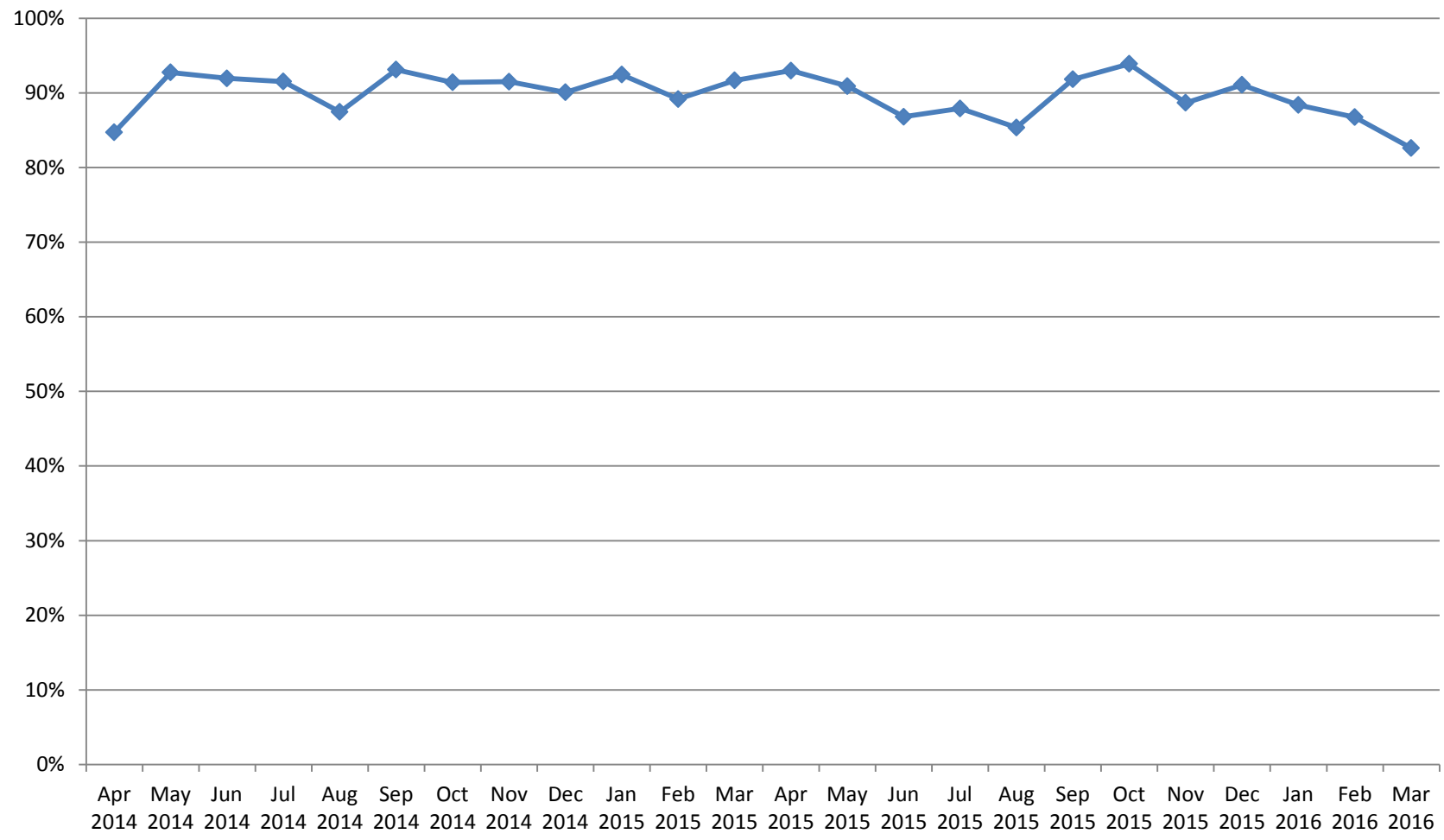
Average Percent of Flights with DEP Received Top Airports : Apr 2014 - Mar 2016



Preferred Flight Levels



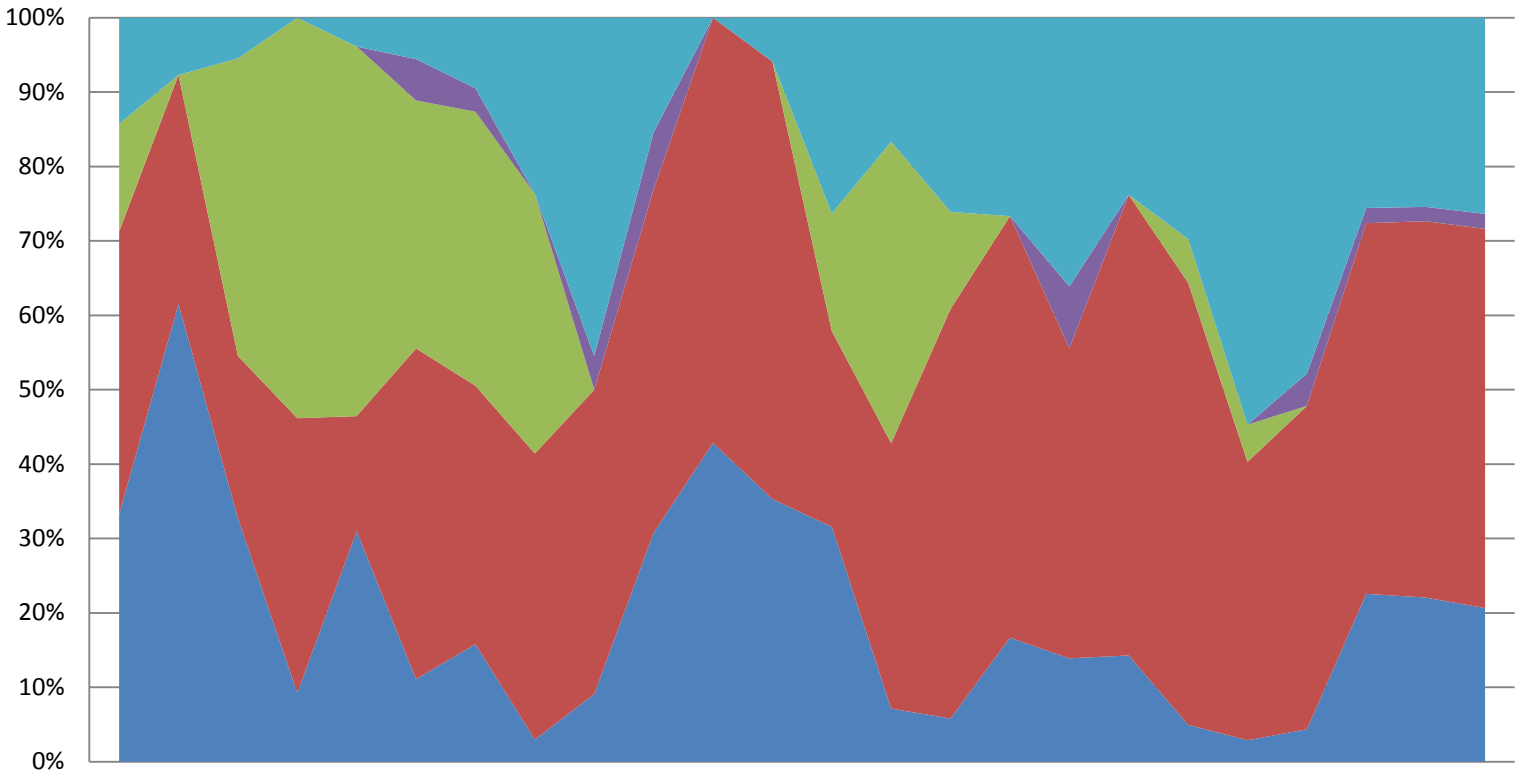
Percentage Achieving Same or Better FL



Causes: Flights Not Achieving Slot Allocation FL



Causes of Flights Not Enter Kabul FIR at Slot Allocation FL

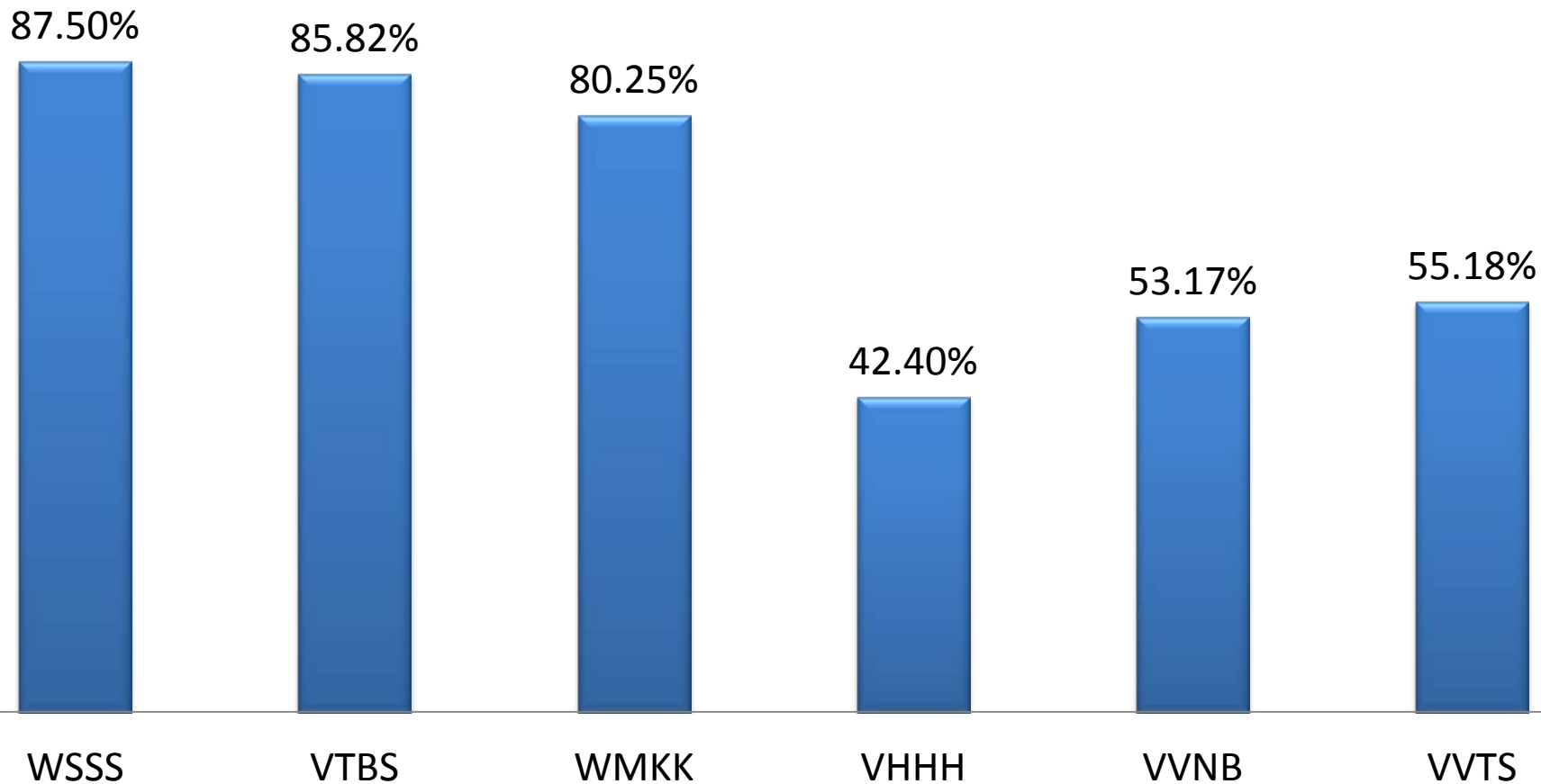


	Apr 2014	May 2014	Jun 2014	Jul 2014	Aug 2014	Sep 2014	Oct 2014	Nov 2014	Dec 2014	Jan 2015	Feb 2015	Mar 2015	Apr 2015	May 2015	Jun 2015	Jul 2015	Aug 2015	Sep 2015	Oct 2015	Nov 2015	Dec 2015	Jan 2016	Feb 2016	Mar 2016
Unknown	9%	4%	5%	0%	4%	8%	15%	36%	45%	13%	0%	5%	31%	28%	30%	25%	34%	24%	32%	58%	48%	21%	21%	22%
No Slot	0%	0%	0%	0%	0%	8%	5%	0%	5%	6%	0%	0%	0%	0%	0%	0%	8%	0%	0%	0%	4%	2%	2%	2%
Tactical ATC Issue	9%	0%	33%	49%	46%	50%	58%	54%	0%	0%	0%	19%	68%	15%	0%	0%	0%	6%	5%	0%	0%	0%	0%	0%
EET Inaccuracy Issue	23%	17%	18%	33%	14%	67%	55%	59%	41%	38%	18%	50%	31%	60%	63%	53%	39%	62%	63%	39%	43%	41%	42%	42%
Departures Punctuality	20%	33%	27%	8%	29%	17%	25%	5%	9%	25%	14%	30%	38%	12%	7%	16%	13%	14%	5%	3%	4%	19%	18%	17%





Average Departure Punctuality - Top Airports Apr 2014 - Mar 2016

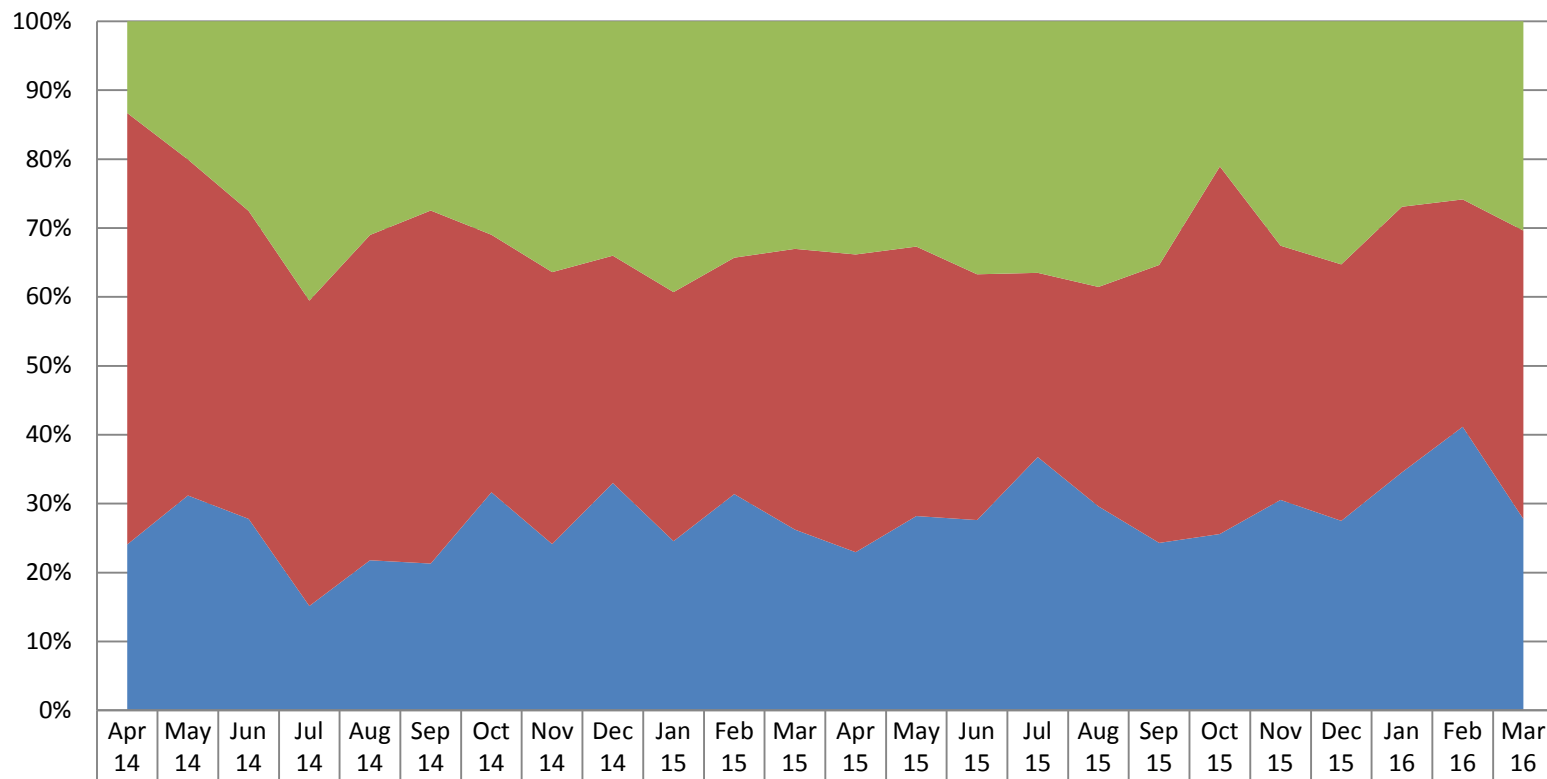


Afghanistan Entry Compliance

Thailand and Myanmar CNS/ATM SYSTEM

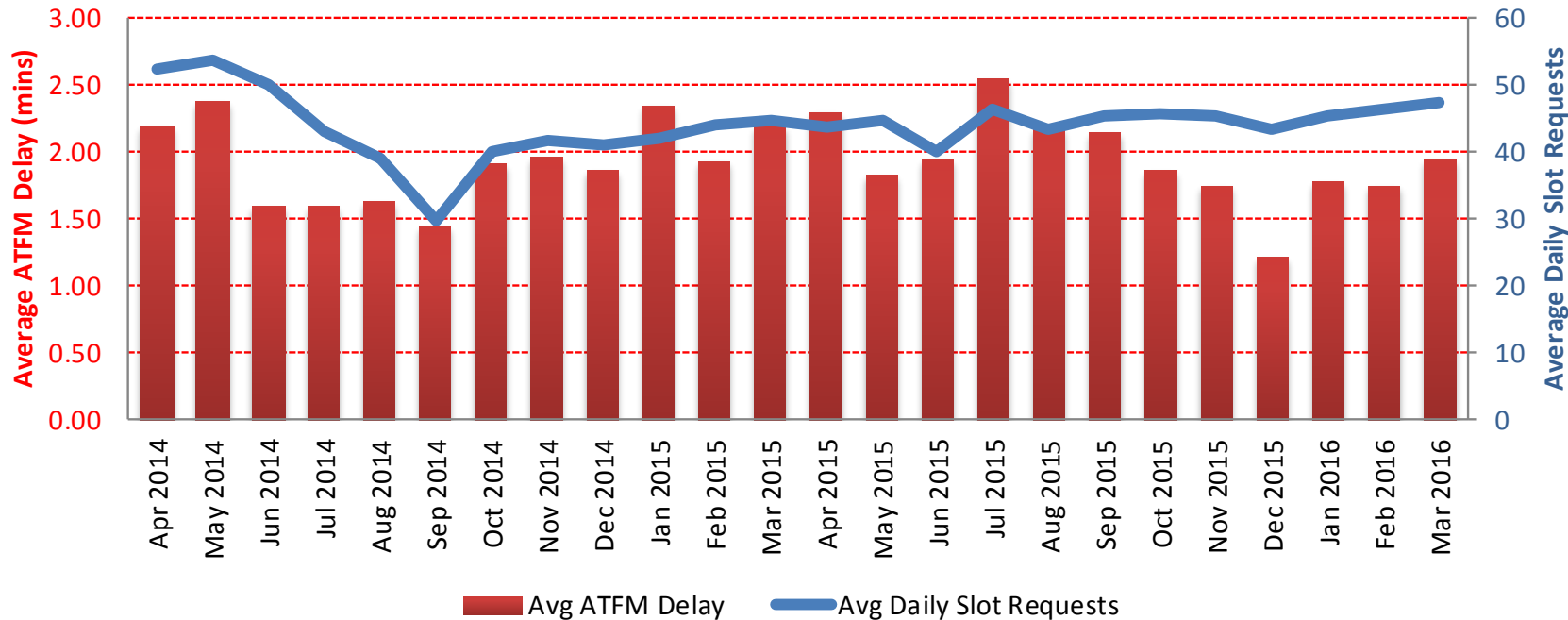


BOBCAT Afghanistan Airspace Entry Compliance

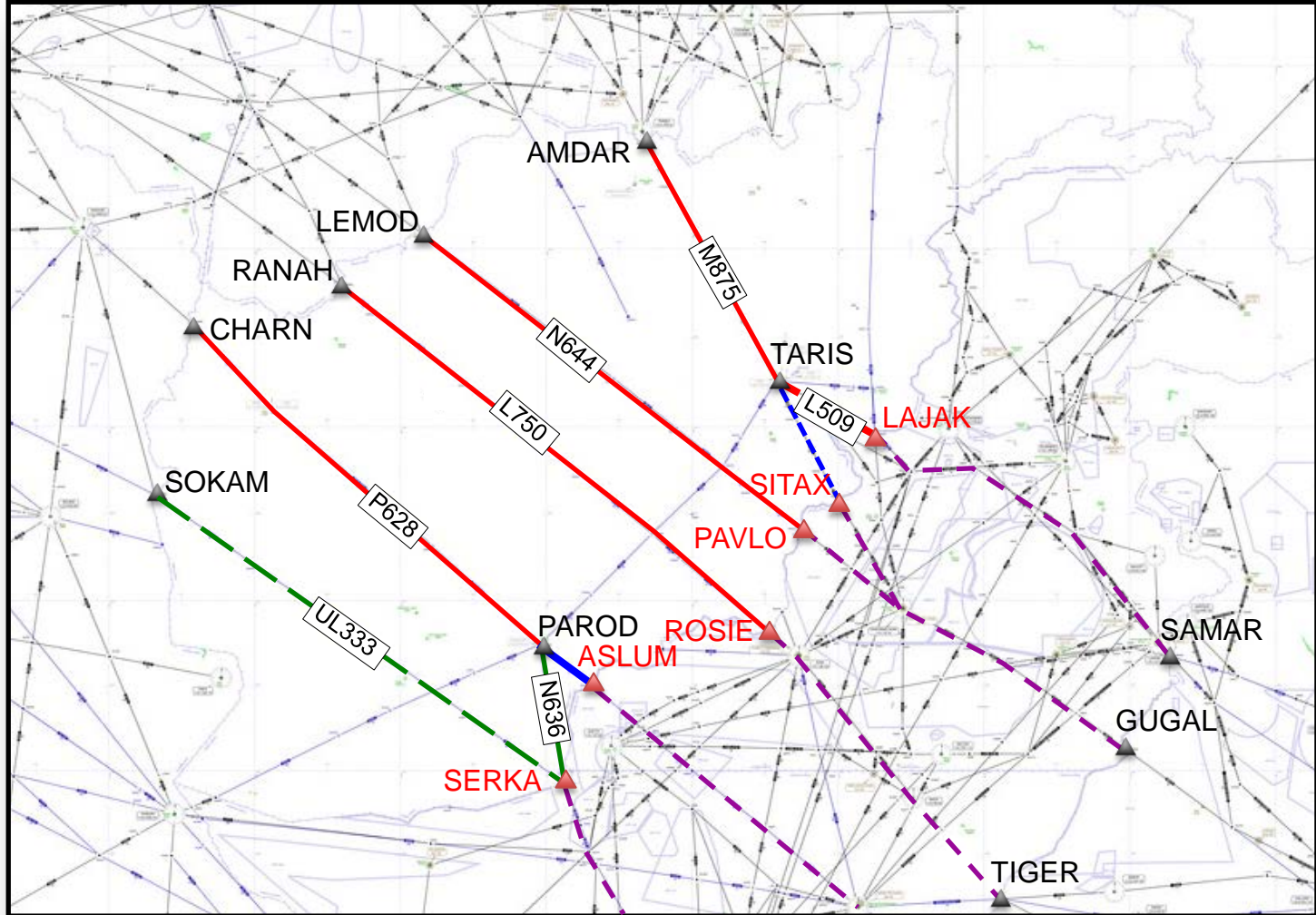




BOBCAT ATFM Delay and Average Daily Slot Requests



Afghanistan Airspace (30 Sep 2015)



- -
 -
 -
 -
 -
 -
- | | | |
|---------------------|---------------|--|
| FL320 – FL400 | FL280 only | FL300 – FL400 |
| FL280 – FL400 | FL280 - FL300 | FL280 – FL400
(no ATFM slot required) |
| Outside Afghanistan | | |



Flight Level Availability (30 Sep 2015)



WP	Route	Flight Levels
LAJAK	L509 – M875	F300 F320 F340 F360 F380 F400
SITAX	M875	F280
PAVLO	N644	F280 F300 F320 F340 F360 F380 F400
ROSIE	L750	F280 F300 F320 F340 F360 F380 F400
ASLUM	P628	F320 F340 F360 F380 F400
SERKA	N636 – P628	F280 F300
SERKA	UL333	F280 F300 F320 F340 F360 F380 F400

Note: no slot is required for route UL333

Separation & Spacing – Kabul FIR (30 Sep 2015)



WP	Route	Kabul Separation	Spacing
LAJAK	L509 – M875	50NM (RNP 10)	7+5
SITAX	M875	50NM (RNP 10)	7+5
PAVLO	N644	50NM (RNP 10)	7+5
ROSIE	L750	50NM (RNP 10)	7+5
ASLUM	P628	50NM (RNP 10)	7+5
SERKA	N636 – P628	50NM (RNP 10)	7+5
SERKA	UL333	50NM (RNP 10)	7+5

Note: no slot is required for route UL333