NAMIBIA ASBU WORKSHOP EXERCISE 12 – 17 AUGUST 2012 IN NAIROBI

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NAMIBIA FIR AIR NAVIGATION INFRASTRUCTURE

- ATS equipment sites_2010.doc
- ..\Desktop\ATIS – VOLMET_2010.doc

PIA 1: BLOCK 0 MODULE SELECTION

Modules	*Y/N*	*Remark*
B0-65: Improved Airport Accessibility	*Y*	
B0-70: Improved Runway Throughput with Wake Turbulence Separation	*N*	*Low traffic*
B0-15: Improved Runway Traffic Flow through Sequencing (AMAN/DMAN)	*N*	*Low traffic*
B0-75: Improved Runway Safety (A-SMGCS Level 1-2)	*UC*	*Walvis Bay Airport is characterised by fog on daily basis*
B0-80: Improved Airport Operations through Airport-CDM	*Y*	

PIA 2: BLOCK 0 MODULE SELECTION

Module	***Y/N***	***Remarks***
B0-25: Increased Interoperability, Efficiency and Capacity through Ground-Ground Integration	*Y*	
B0-30: Service Improvement through Digital Aeronautical Information Management	Y	On going and to be implemented as scheduled
B0-105: Meteorological Forecast, Warnings and Alerts	*Y*	

PIA 3: BLOCK 0 MODULE SELECTION (PART 1)

Modules	*Y/N*	*Remarks*
B0-10: Improved Operations through Enhanced En-Route Trajectories	*N*	*Low traffic*
B0-35: Improved Flow Performance through Planning based on Network-Wide view	*N*	*Low traffic*
B0-84: Initial Capability for Ground-Ground Cooperative Surveillance	*N*	*It is a luxuriate*
B0-85: Air Traffic Situational Awareness (ATSA)	*N*	*Low traffic*

PIA 3: BLOCK 0 MODULE SELECTION (PART 2)

Modules	*Y/N*	*Remarks*
B0-86: Improved access to Optimum Flight Levels through Climb/Descent Procedures using ADS-B	*N*	*Low Traffic*
B0-101: ACAS Improvements	*Y*	
B0-102: Increased Effectiveness of Ground-based Safety Nets	*N*	*Not warranted due low Traffic*

PIA 4: BLOCK 0 MODULE SELECTION

Modules	Y/N	Remarks
B0-05: Improved Flexibility in Descent Profiles (CDOs)	Y	
B0-40: Improved Safety and Efficiency through the initial application of Data Link En-Route	Y	On going and to implemented in September 2012
B0-20: Improved Flexibility and Efficiency in Departure Profiles	N	

NAMIBIA SELECTED MODULES

- B0-65: Optimization of Approach Procedures including Vertical Guidance
- B0-80: Improved Airport Operations through ACDM
- B0-05: Improved Flexibility in Descent Profiles (CDOs)

Air Navigation Report Forms

REGIONAL/NATIONAL PERFORMANCE OBJECTIVE
IMPROVED OPERATIONS THROUGH ENHANCED
EN-ROUTE TRAJECTORIES (ASBU B0-10)
Performance Improvement Area 3:
Optimum Capacity and Flexible Flights – Through Global Collaborative ATM

ASBU B0-65: Impact on Main Key Performance Areas (KPA)

	Access & Equity	Capacity	Efficiency	Environment	Safety
Applicable	Y	Y	Y	Y	Y

ASBU B0-65: Implementation Progress

Elements	Implementation Status (Ground and Air)
1. APV with Baro VNAV	On going but VNAV only
2. RNAV and RNP (GNSS/PBN)	On going to be implemented December 2012
3. WGS84	Needs update

ASBU B0-65: Implementation Roadblocks/Issues (Problem Areas and who is responsible)

Elements	Implementation Area			
	Ground system Implementation	Avionics Implementation	Procedures Availability	Operational Approvals
1. APV with Baro VNAV	None	None	In place	Subject to approval
2. RNAV and RNP (GNSS/PBN)	N	Most a/c already equipped	Subject to approval	Subject to flight test and certifications
3. WGS84	N	N	N	N

Air Navigation Report Forms

ASBU B0-65: Performance Monitoring and Measurement (Infrastructure)	
Infrastructure/Implementation referring to elements of the Module	**Performance Metrics**
1. APV with Baro VNAV	FYWH, FYLZ, FYAR, FYOA, FYKM and FYWB drafted designs, completed
2. RNAV and RNP (GNSS/PBN)	RNAV/GNSS for FYWH, FYLZ, FYAR, FYOA, FYKM and FYWB drafted designs, completed
3. WGS84	Completion of Area Survey for WGS84 update by December 2012

ASBU B0-65: Performance Monitoring and Measurement(KPAs)	
Module benefits to Key Performance Areas	**Performance Metrics**
Access & Equity	Percentage of instrument runway ends having an APV
Capacity	Number of movements per day per aerodrome
Efficiency	Percentage of PBN routes
Environment	Kilograms of CO_2 emissions reduced per operation
Safety	Number of incidents/accidents due to MET conditions

AIR NAVIGATION REPORT FORMS

REGIONAL/NATIONAL PERFORMANCE OBJECTIVE
IMPROVED OPERATIONS THROUGH ENHANCED
EN-ROUTE TRAJECTORIES (ASBU B0-10)
Performance Improvement Area 3:
Optimum Capacity and Flexible Flights – Through Global Collaborative ATM

ASBU B0-80: Impact on Main Key Performance Areas (KPA)

	Access & Equity	Capacity	Participation of the ATM Community	Predictability	Safety
Applicable	N	N	Y	Y	N

ASBU B0-80: Implementation Progress

Elements	Implementation Status (Ground and Air)
1. Airport –CDM through Interaction with various partners' in aviation industry	On going traditional hanger talks will be transformed into formal CDM platforms
2. Aerodrome certification, Aerodrome emergency planning, Airport planning	On going

ASBU B0-80: Implementation Roadblocks/Issues (Problem Areas and who is responsible)

Elements	Implementation Area			
	Ground system Implementation	Avionics Implementation	Procedures Availability	Operational Approvals
1. Airport –CDM through Interaction with various partners' in aviation industry	N/A	N/A	N/A	N/A
2. Aerodrome certification, Aerodrome emergency planning, Airport planning	N/A	N/A	Complete	50 % draft procedures have been approved

AIR NAVIGATION REPORT FORMS (CONTINUED)

ASBU B0-80: Performance Monitoring and Measurement (Infrastructure)	
Infrastructure/Implementation referring to elements of the Module	**Performance Metrics**
1. Airport –CDM through Interaction with various partners' in aviation industry	Informal hanger talk interaction is on-going. National airspace committee (Military, Intelligence, Police, NDCA, etc) was established on September 17 2011. Formal CDM interaction with flying fraternity should take place by December 2012
2. Aerodrome certification, Aerodrome emergency planning, Airport planning	On going Number of certified Aerodrome, Number of AEP consultation meetings, 100 % exposure to NAC strategic plan

ASBU B0-80: Performance Monitoring and Measurement(KPAs)	
Module benefits to Key Performance Areas	**Performance Metrics**
Participation of the ATM community	Level of participation in meetings Level of responses to planning activities
Predictability	Arrival/departure delay (in minutes) at airport)

ANF: B0-05: IMPROVED FLEXIBILITY IN DESCENT PROFILES (CDOS)

REGIONAL/NATIONAL PERFORMANCE OBJECTIVE
IMPROVED OPERATIONS THROUGH ENHANCED
EN-ROUTE TRAJECTORIES (ASBU B0-10)
Performance Improvement Area 3:
Optimum Capacity and Flexible Flights – Through Global Collaborative ATM

ASBU B0-05: Impact on Main Key Performance Areas (KPA)

	Access & Equity	Capacity	Efficiency	Environment	Safety
Applicable	N	N	Y	Y	Y

ASBU B0-05: Implementation Progress

Elements	Implementation Status (Ground and Air)
1. CDO	To be developed by June 2013
2. PBN STARs	GNSS procedures fully developed awaiting flight test and approval. PBN roadmaps and implementation plans, still to be developed within the last quarter of 2012

ASBU B0-05: Implementation Roadblocks/Issues (Problem Areas and who is responsible)

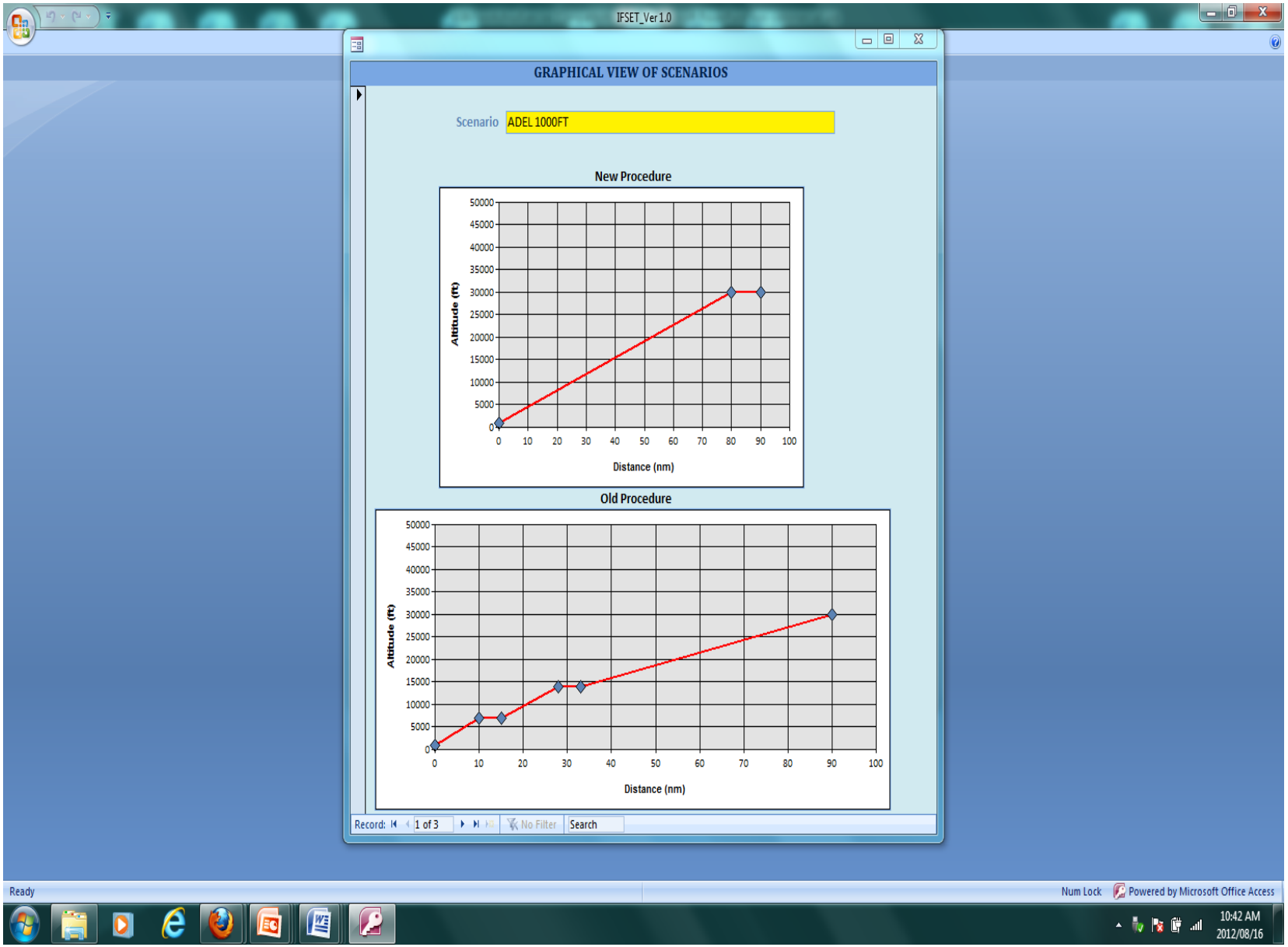
Elements	Implementation Area			
	Ground system Implementation	Avionics Implementation	Procedures Availability	Operational Approvals
1. CDO	None	N/A	To be designed	Not yet in place
2. PBN STARs	N/A	N/A	GNSS procedures completed	Subject to flight test and certifications

ANF: B0-05: IMPROVED FLEXIBILITY IN DESCENT PROFILES (CDOS)

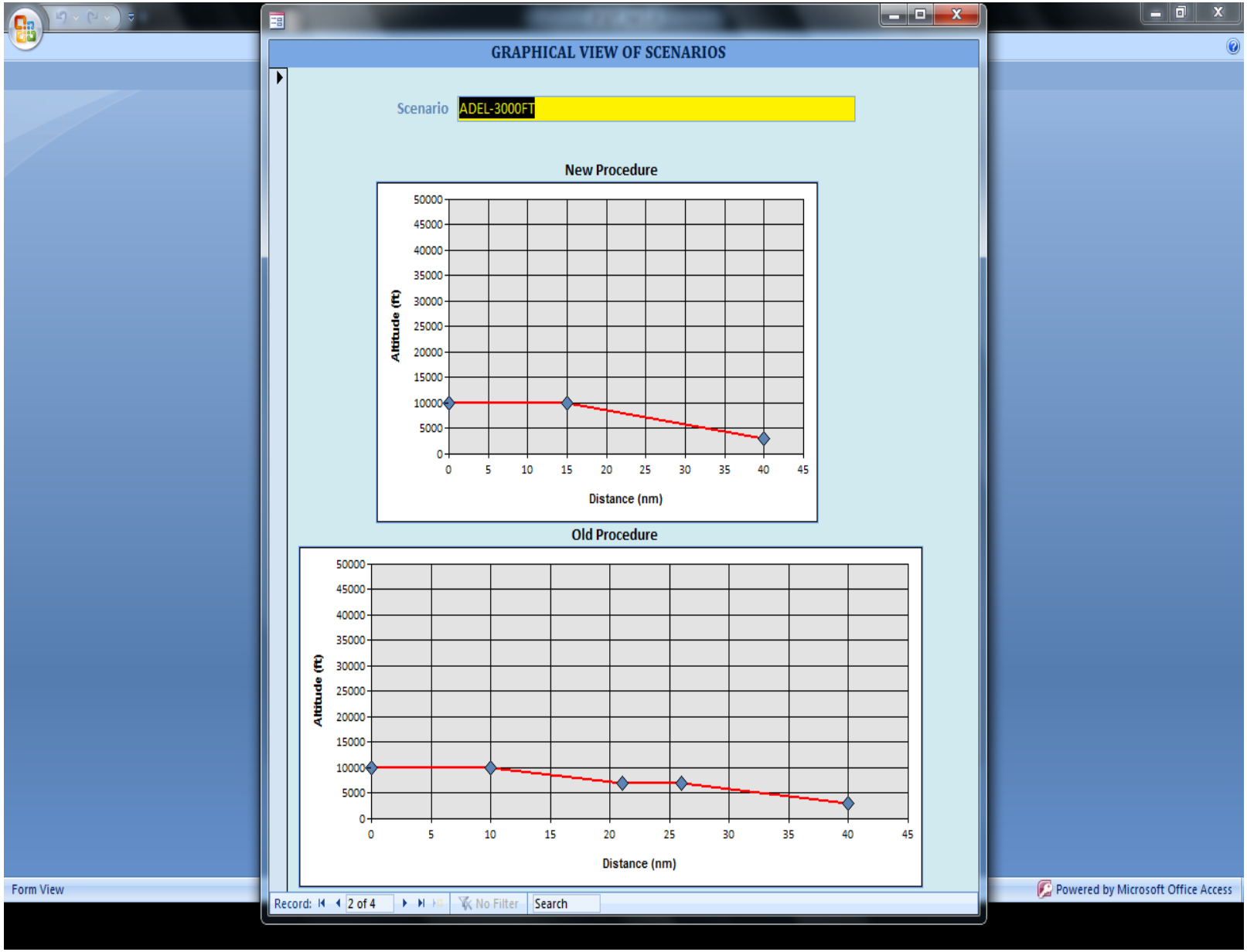
ASBU B0-05: Performance Monitoring and Measurement (Infrastructure)	
Infrastructure/Implementation referring to elements of the Module	**Performance Metrics**
1. CDO	Airspace design is completed. Procedure design to be completed by June 2013. Implementation can be expected by October 2012
2. PBN STARs	Total Implementations of PBN at major airports (FYWH and FYWB) by June 2013

ASBU B0-05: Performance Monitoring and Measurement(KPAs)	
Module benefits to Key Performance Areas	**Performance Metrics**
Efficiency	Percentage of PBN routes Kilograms of fuel saved per operation
Environment	Kilograms of CO_2 emissions reduced per operation
Safety	Percentage reduction in the incidence of controlled flight into terrain (CFIT) Percentage reduction in the number of conflicts

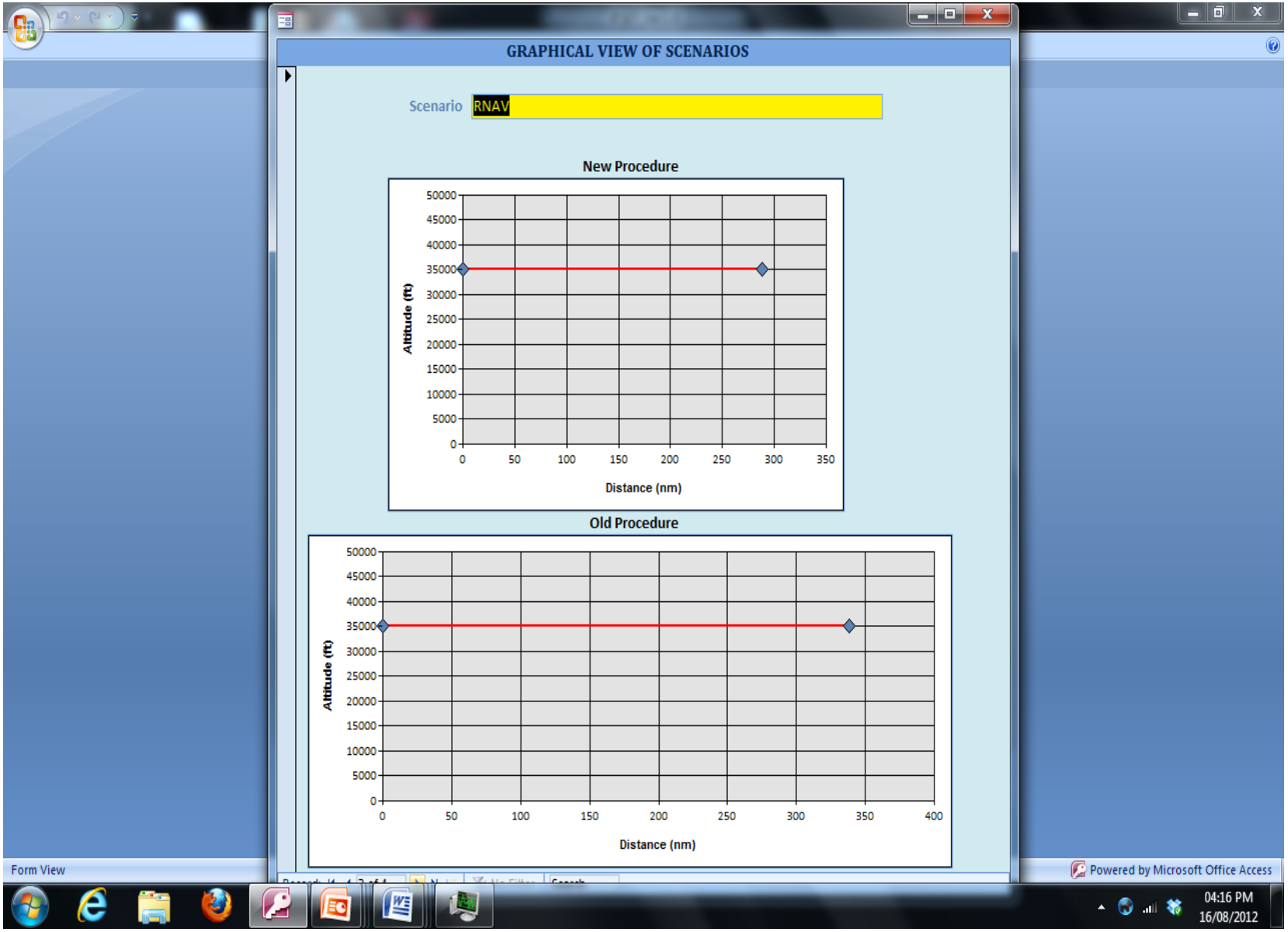
IFSET RESULT FOR ADEL 1000FT



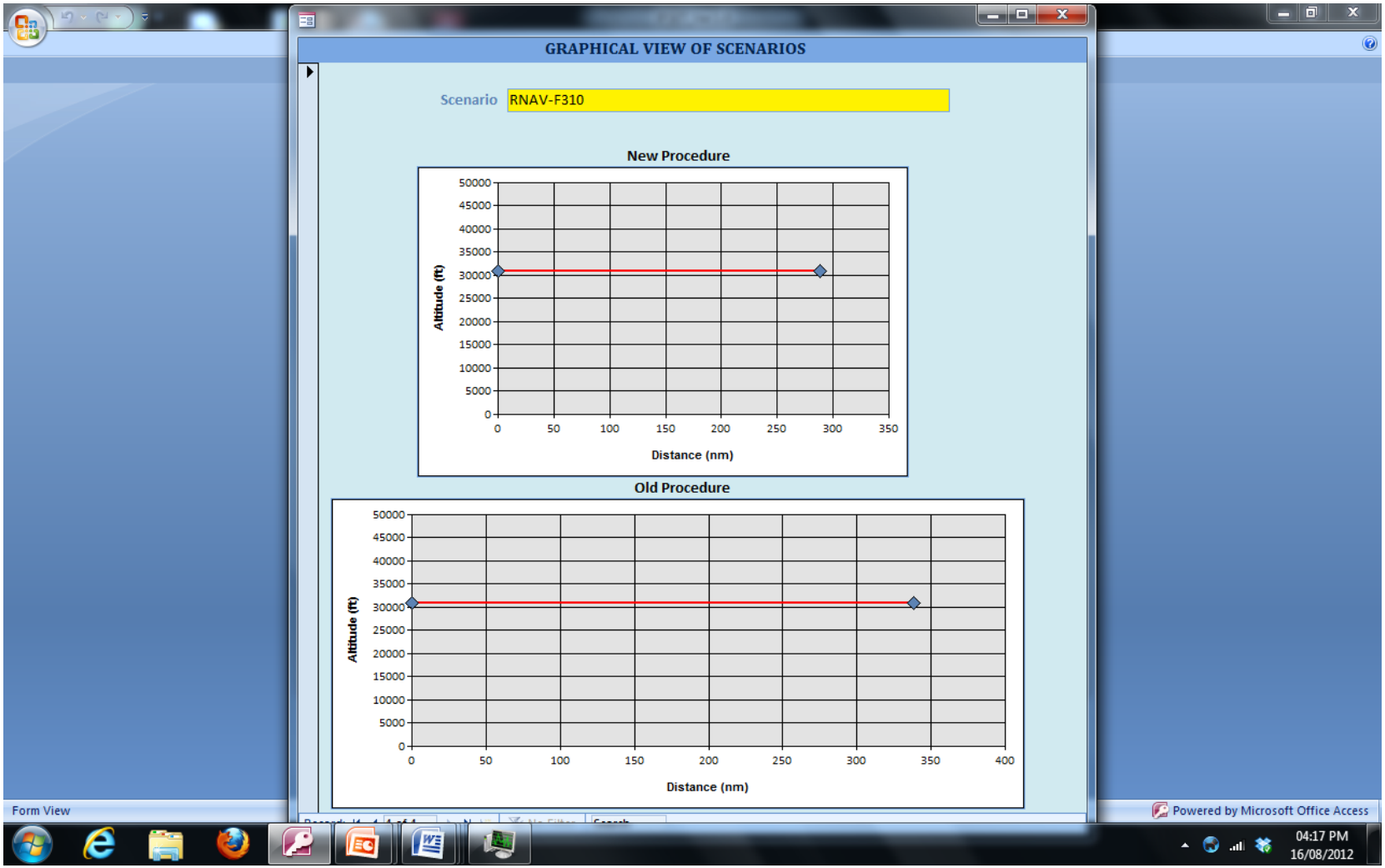
IFSET RESULT FOR ADEL 3000FT



IFSET RESULT FOR ADEL RNAV



IFSET RESULT FOR ADEL RNAV -F310



IFSET REPORT

IFSET_Ver 1.0

Fuel Savings Report

Estimated Fuel Savings Report

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Scenario	Old Fuel Consumption (Kg)	New Fuel Consumption (Kg)	Savings (Kg)	Savings (%)
ADEL-1000F	268100	264500	-3600	-1.3
ADEL-3000F	47300	47300	0	0.0
RNAV	694900	592400	-102500	-14.8
RNAV-F310	87500	74500	-13000	-14.9

Export to Excel

Detailed Fuel Savings Report

16 August 2012

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Report View

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Emission of Co2 saved/reduced

Airport	Old Fuel consumption in Kg	New Fuel consumption in Kg	Savings in Kg	Savings in %	Emission of C02 Saved
ADEL 1000FT	286100	264500	-3600	-1.3	-11.365
ADEL 3000FT	47300	47300	0	0.0	0

3.157 X KG FUEL SAVED = EMISSION OF CO2 SAVED

GIS

- 0-50% Red
- 50-75% Orange
- 75-100% Green

- **See for yourself**

FEED BACK

Tentative action

Victor Likando : ABDSU Project Managing Director

Abiatar Ntinda : ABDSU Project Managing Director

Leornard Kamari : Project Secretary (ATS)
AIM Officer : Member
MET Officer :Member

ASBU work shop : 11 – 12 September 2012

Well done