



System Description Report Models and Modules

Test Event Name: *First Conceptual Validation of DEXES II*

Test Event Type: *ConceptualModelValidation* **Test Event Description:** *Test event performed to validate the conceptual models of a system*

Test Event Date: *3/31/2012* **Test Event Location:** *Oak Ridge, TN* **Auspices:** *Northrop Grumman Corp (NGC)*

System Use Tested For: *General modeling of the socio-political conditions that can lead to political instability, low intensity conflict and non-kinetic warfare*

System Granularity for this Use: *4 Modeled at the regional level*

SystemName: <i>Deployable Exercise System II (DEXES II)</i>		SystemVersion: <i>1.00.00</i>	
System Start Date: <i>09/01/2010</i>		Lock Date: <i>03/31/2012</i>	
Abandon Date: <i>01/01/2013</i>			
HumanRole: <i>Mixed</i>	PMESII Breadth: <i>8 of 8</i>	Dimension: <i>2D - Square tiles</i>	TimeSpan: <i>Years</i>
Sides: <i>N/A</i>	PMESII Detail: <i>Low Detail</i>	Elevation: <i>None</i>	TimeInterval: <i>Weeks</i>
Causality: <i>Stochastic</i>	Span: <i>Supra-national</i>		ProjHorizon: <i>25 Years</i>
Structure: <i>System, Tightly Coupled</i>	Granularity: <i>Modeled at the local level</i>	Computer: <i>Laptop</i>	Status: <i>Implemented, Alpha</i>
Methodology: <i>Database GIS GUI SimulationTS Webpage</i>	OperatingSys: <i>Windows XP WindowsXPServer Windows 7 Windows 7Server</i>	Language: <i>SQL Visual Basic C++ Javascript R ASPX</i>	Use: <i>Strategic Operational Analysis Education Training DisasterOther Crime Terrorism Insurgency</i>

ModelName ModuleName	ModelVersion ModuleVersion	Inclusion Date Inclusion Date	Start Date Start Date	Lock Date Lock Date	Abandon Date Abandon Date
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Deployable Exercise System II (DEXES-II)	<i>1.00.00</i>	<i>09/01/2010</i>	<i>09/01/2010</i>	<i>3/31/2012</i>	<i>01/01/2013</i>
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HumanRole: <i>ClosedForm</i>	PMESII Breadth: <i>8 of 8</i>	Dimension: <i>2D - Square tiles</i>	TimeSpan: <i>Years</i>
Sides: <i>N/A</i>	PMESII Detail: <i>Low Detail</i>	Elevation: <i>None</i>	TimeInterval: <i>Weeks</i>
Causality: <i>Stochastic</i>	Span: <i>Supra-national</i>		ProjHorizon: <i>25 Years</i>
Structure: <i>Simulation, Object Oriented (large agent)</i>	Granularity: <i>Modeled at the local level</i>	Computer: <i>Laptop</i>	Status: <i>Implemented, Alpha</i>
Methodology: <i>SimulationTS</i>	OperatingSys: <i>Windows XP Windows 7</i>	Language: <i>C++ R</i>	Use: <i>DisasterOther Crime Terrorism Insurgency</i>

DEXES Scenario Language	<i>1.03</i>	<i>09/01/2010</i>	<i>09/01/2010</i>	<i>3/31/2012</i>	<i>01/01/2013</i>
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HumanRole: <i>ClosedForm</i>	PMESII Breadth: <i>0 of 8</i>	Dimension: <i>N/A</i>	TimeSpan: <i>None</i>
Sides: <i>N/A</i>	PMESII Detail: <i>Zero</i>	Elevation: <i>N/A</i>	TimeIntreval: <i>None</i>
Causality: <i>None</i>	Span: <i>N/A</i>		ProjHorizon: <i>None</i>
Structure: <i>Language/Text Parser</i>	Granularity: <i>Not modeled</i>	Computer: <i>Laptop</i>	Status: <i>Implemented, Alpha</i>
Methodology: <i>TextAnalysis</i>	OperatingSys: <i>Windows XP Windows 7</i>	Language: <i>DEXESScenaLang</i>	Use: <i>Control</i>

DEXES-II Simulation Engine	<i>1.00.00</i>	<i>09/01/2010</i>	<i>09/01/2010</i>	<i>3/31/2012</i>	<i>01/01/2013</i>
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HumanRole: <i>ClosedForm</i>	PMESII Breadth: <i>8 of 8</i>	Dimension: <i>2D - Square tiles</i>	TimeSpan: <i>Years</i>
Sides: <i>N/A</i>	PMESII Detail: <i>Low Detail</i>	Elevation: <i>None</i>	TimeIntreval: <i>Weeks</i>
Causality: <i>Stochastic</i>	Span: <i>Supra-national</i>		ProjHorizon: <i>25 Years</i>
Structure: <i>Simulation, Object Oriented (large agent)</i>	Granularity: <i>Modeled at the local level</i>	Computer: <i>Laptop</i>	Status: <i>Implemented, Alpha</i>
Methodology: <i>SimulationTS</i>	OperatingSys: <i>Windows XP Windows 7 Linux Mac OS X</i>	Language: <i>C++ R</i>	Use: <i>DisasterOther Crime Terrorism Insurgency</i>

ModelName	ModelVersion	Inclusion Date	Start Date	Lock Date	Abandon Date
ModuleName	ModuleVersion	Inclusion Date	Start Date	Lock Date	Abandon Date
DEXES Controller	1.00.00	09/01/2010	09/01/2010	3/31/2012	01/01/2013
HumanRole: <i>Human-in-the-Loop</i>	PMESII Breadth: 0 of 8	Dimension: <i>N/A</i>	TimeSpan: <i>None</i>		
Sides: <i>N/A</i>	PMESIIDetail: <i>Zero</i>	Elevation: <i>N/A</i>	TimeInterval: <i>None</i>		
Causality: <i>None</i>	Span: <i>N/A</i>	ProjHorizon: <i>None</i>			
Structure: <i>Web Page</i>	Granularity: <i>Not modeled</i>	Computer: <i>Laptop</i>	Status: <i>Implemented, Alpha</i>		
Methodology: <i>GIS</i> <i>GUI</i> <i>Webpage</i>	OperatingSys: <i>WindowsXP Server</i> <i>Windows 7 Server</i>	Language: <i>Visual Basic</i> <i>Javascript</i> <i>ASPX</i>	Use: <i>Situation Displa</i> <i>Control</i>		
DEXES Controller Module	1.00.00	09/01/2010	09/01/2010	3/31/2012	01/01/2013
HumanRole: <i>Human-in-the-Loop</i>	PMESII Breadth: 0 of 8	Dimension: <i>N/A</i>	TimeSpan: <i>None</i>		
Sides: <i>N/A</i>	PMESIIDetail: <i>Zero</i>	Elevation: <i>N/A</i>	TimeIntreval: <i>None</i>		
Causality: <i>None</i>	Span: <i>N/A</i>	ProjHorizon: <i>None</i>			
Structure: <i>Web Page</i>	Granularity: <i>Not modeled</i>	Computer: <i>Laptop</i>	Status: <i>Implemented, Alpha</i>		
Methodology: <i>GIS</i> <i>GUI</i> <i>Webpage</i>	OperatingSys: <i>WindowsXP Server</i> <i>Windows 7 Server</i>	Language: <i>Visual Basic</i> <i>Javascript</i> <i>ASPX</i>	Use: <i>Situation Displa</i> <i>Control</i>		
DEXES Database	1.00.00	09/01/2010	09/01/2010	3/31/2012	01/01/2013
HumanRole: <i>ClosedForm</i>	PMESII Breadth: 0 of 8	Dimension: <i>N/A</i>	TimeSpan: <i>None</i>		
Sides: <i>N/A</i>	PMESIIDetail: <i>Zero</i>	Elevation: <i>N/A</i>	TimeInterval: <i>None</i>		
Causality: <i>None</i>	Span: <i>N/A</i>	ProjHorizon: <i>None</i>			
Structure: <i>Database</i>	Granularity: <i>Not modeled</i>	Computer: <i>Laptop</i>	Status: <i>Implemented, Alpha</i>		
Methodology: <i>Database</i>	OperatingSys: <i>Windows XP</i> <i>Windows 7</i>	Language: <i>SQL</i>	Use: <i>Data Warehouse</i>		
DEXES Database Module	1.00.00	09/01/2010	09/01/2010	3/31/2012	01/01/2013
HumanRole: <i>ClosedForm</i>	PMESII Breadth: 0 of 8	Dimension: <i>N/A</i>	TimeSpan: <i>None</i>		
Sides: <i>N/A</i>	PMESIIDetail: <i>Zero</i>	Elevation: <i>N/A</i>	TimeIntreval: <i>None</i>		
Causality: <i>None</i>	Span: <i>N/A</i>	ProjHorizon: <i>None</i>			
Structure: <i>Database</i>	Granularity: <i>Not modeled</i>	Computer: <i>Laptop</i>	Status: <i>Implemented, Alpha</i>		
Methodology: <i>Database</i>	OperatingSys: <i>Windows XP</i> <i>Windows 7</i>	Language: <i>SQL</i>	Use: <i>Data Warehouse</i>		



System Description Report Connections

Test Event Name: *First Conceptual Validation of DEXES II*

Test Event Type: *ConceptualModelValidation* **Test Event Description:** *Test event performed to validate the conceptual models of a system*

Test Event Date: *3/31/2012* **Test Event Location:** *Oak Ridge, TN* **Auspices:** *Northrop Grumman Corp (NGC)*

System Use Tested For: *General modeling of the socio-political conditions that can lead to political instability, low intensity conflict and non-kinetic warfare*

System Granularity for this Use: *4 Modeled at the regional level*

SystemName: *Deployable Exercise System II (DEXES II)* **SystemVersion:** *1.00.00*

ConnectionName		Connection Type	Connection Description	
From Model Name	From Model Version		To Model Name	To Model Version
From Module Name	From Module Version		To Module Name	To Module Version
CompletionReport		Fully Automatic	Report completion or errors to Controller	
<i>Deployable Exercise System II (DEXES-II)</i>	<i>1.00.00</i>		<i>DEXES Controller</i>	<i>1.00.00</i>
<i>DEXES-II Simulation Engine</i>	<i>1.00.00</i>	→	<i>DEXES Controller Module</i>	<i>1.00.00</i>
DeliverScenario		Fully Automatic	Deliver scenario file for parsing	
<i>Deployable Exercise System II (DEXES-II)</i>	<i>1.00.00</i>		<i>Deployable Exercise System II (DEXES-II)</i>	<i>1.00.00</i>
<i>DEXES Scenario Language</i>	<i>1.03</i>	→	<i>DEXES-II Simulation Engine</i>	<i>1.00.00</i>
EditScenario		Fully Manual	Edit the scenario file	
<i>DEXES Controller</i>	<i>1.00.00</i>		<i>Deployable Exercise System II (DEXES-II)</i>	<i>1.00.00</i>
<i>DEXES Controller Module</i>	<i>1.00.00</i>	→	<i>DEXES Scenario Language</i>	<i>1.03</i>
InitiateSimulation		Fully Manual	Send parameter file and initiating instructions to DEXES-II	
<i>DEXES Controller</i>	<i>1.00.00</i>		<i>Deployable Exercise System II (DEXES-II)</i>	<i>1.00.00</i>
<i>DEXES Controller Module</i>	<i>1.00.00</i>	→	<i>DEXES-II Simulation Engine</i>	<i>1.00.00</i>
ReportScenario		Fully Manual	Display scenario file	
<i>Deployable Exercise System II (DEXES-II)</i>	<i>1.00.00</i>		<i>DEXES Controller</i>	<i>1.00.00</i>
<i>DEXES Scenario Language</i>	<i>1.03</i>	→	<i>DEXES Controller Module</i>	<i>1.00.00</i>
RequestScenario		Fully Automatic	Request scenario file for parsing	
<i>Deployable Exercise System II (DEXES-II)</i>	<i>1.00.00</i>		<i>Deployable Exercise System II (DEXES-II)</i>	<i>1.00.00</i>
<i>DEXES-II Simulation Engine</i>	<i>1.00.00</i>	→	<i>DEXES Scenario Language</i>	<i>1.03</i>
RetrieveData		Semi-automatic	Send to retrieve data from the database	
<i>DEXES Controller</i>	<i>1.00.00</i>		<i>DEXES Database</i>	<i>1.00.00</i>
<i>DEXES Controller Module</i>	<i>1.00.00</i>	→	<i>DEXES Database Module</i>	<i>1.00.00</i>

ConnectionName		Connection Type	Connection Description	
From Model Name	From Model Version		To Model Name	To Model Version
From Module Name	From Module Version		To Module Name	To Module Version
SendResults		Fully Automatic	Send the requested output data to the Controller	
DEXES Database	1.00.00		DEXES Controller	1.00.00
DEXES Database Module	1.00.00	→	DEXES Controller Module	1.00.00
StoreRunData		Fully Automatic	Store the results of the run in the database	
Deployable Exercise System II (DEXES-II)	1.00.00		DEXES Database	1.00.00
DEXES-II Simulation Engine	1.00.00	→	DEXES Database Module	1.00.00