



Australian Government  
Department of Defence

# Australian Defence Simulation Glossary



**Version 1.0**

**Prepared by:**

**Australian Defence Simulation Office**

Department of Defence, Canberra

<http://intranet.defence.gov.au/cio/>



Australian Government  
Department of Defence

## Foreword

The Australian Defence Simulation Glossary provides a source of simulation acronyms, terms and definitions used in the Australian Department of Defence. Further simulation terms can be sourced from the US DOD Modeling and Simulation Glossary (DOD 5000.59-M) located at <https://www.dmsomil/public/resources/glossary/>. Other non-simulation terms can be sourced from the Defence Language Management System (<http://dlms.dcb.defence.gov.au/>).

The Glossary is a living document and will be updated as required given advances in the relevant technology. Comments or further clarification on any aspect of the Glossary are welcomed and should be directed to:

Australian Defence Simulation Office  
Russell Offices  
R1-3-B065  
CANBERRA ACT 2600

A handwritten signature in black ink that reads "Cliff White".

Cliff White  
Director-General, Simulation  
Australian Defence Simulation Office

Telephone: (02) 6265 2019  
Facsimile: (02) 6265 2223  
Email: [cliff.white@defence.gov.au](mailto:cliff.white@defence.gov.au)

**Acronyms:**

<b>Abbrev</b>	<b>Decode</b>
AADS	Advanced Air Defence Simulator
AAR	After Action Review
AARNET	Australian Academic and Research Network
AdatP-34	Allied Data Publication 34
ADBOM	Australian Defence Base Object Model
ADSL	Advanced Distributed Simulation Laboratory
ADSO	Australian Defence Simulation Office
AEF	Army Experimentation Framework
AF	Automated Force
AI	Artificial Intelligence
AOSC	Air Operations Simulation Centre
API	Application Programmers Interface
ASE	Army Synthetic Environment
ASE	Aerospace Synthetic Environment
ASW	Army Simulation Wing
BCSS	Battlefield Command Support System
BFTT	Battle Force Tactical Training
BOM	Base Object Model
C3I	Command, Control, Communications and Intelligence.
C4	Command, Control, Communications and Computer
C4ISR	Command, Control, Communication, Computer, Intelligence, Surveillance and Reconnaissance
CATT	Combined Arms Tactical Training
CFBL	Combined Federated Battle Labs
CGA	Computer Generated Actors
CGF	Computer Generated Forces
CIS	Communication and Information Systems
COA-SIM	Course Of Action - Simulation
COTS	Commercial-Off-The-Shelf
CReaMS	Coalition Readiness Integration Management System
CSTT	Combat System Team Trainer
DAES	Directorate of Analysis, Experimentation and Simulation (UK)
DAF	Defence Architecture Framework
DEF	Defence Experimentation Framework
DGSIM	Director-General, Simulation
DICE	Distributed Interactive C31 Effectiveness
DIE	Defence Information Environment
DIE ATSL	Defence Information Environment Approved Technology Standards List
DIS	Distributed Interactive Simulation
DMSO	Defence Modelling & Simulation Office (US)
DMT	Distributed Mission Training
DOF	Degrees of Freedom
DSE	Defence Simulation Environment
DSF	Defence Simulation Forum
DSG	Distributed Simulation Guide
DSILI	Distributed Simulation Infrastructure Library Interposer
DSP	Defence Simulation Plan

DSTO	Defence Science and Technology Organisation
DTS	DIS Test Suite
DWACN	Defence Wide Area Communications Network
EADSIM	Extended Air Defence Simulation
FOM	Federation Object Model
HBM	Human Behavioural Models
HIL	Human In the Loop
HLA	High Level Architecture
HMI	Human/Machine Interface
HwIL	Hardware In the Loop
IA	Intelligent Agents
ICT	Information and Communications Technology
IEEE	Institute of Electrical and Electronics Engineers
IITSEC	Interservice-Industry, Simulation and Education Conference
IOTTF	Integrated Operations Team Training Facility
ISO	International Standards Organisation
ITEC	International Training Equipment Conference
JACK	(Intelligent Agent Software, by AOS (Australia))
JCATS	Joint Conflict and Tactical Simulation
JOANNE	Joint Air Navy Networking Environment
JSAF	Joint Semi-Automated Forces
JSC	Joint Simulation Capability
JSE	Joint Synthetic Environment
JTLS	Joint Theatre Level Simulation
M&S	Modelling and Simulation
MARS	Modular Adaptable Radar Simulator
ModSAF	Modular Semi-Automated Forces
MOE	Measure Of Effectiveness
MOO	Measure of Outcome
MOP	Measure Of Performance
MOUT	Military Operations in Urban Terrain
MOTS	Military Off the Shelf
MWTC	Maritime Warfare Training Centre
MWTS	Maritime Warfare Training System
NMSG	NATO Modelling and Simulation Group
NSO	Navy Simulation Office
NTMF (US)	Navy Training Meta-FOM
NTSA	National Training Systems Association (US)
OBTS	On Board Training System
OMT	Object Model Template
PDU	Protocol Data Unit
RAAFSA	RAAF Simulation Agency
ROE	Rules Of Engagement
ROI	Return On Investment
RP&D	Rapid Prototyping and Development
RPR-FOM	Real-time Platform Reference FOM
RTI	Run Time Infrastructure
SAF	Semi-Automated Forces
SCG	Simulation Coordination Group
SE	Synthetic Environment

SECO	Synthetic Environment Coordinating Office (Canada)
SEDRIS	Synthetic Environment Data Representation and Interchange Specification
SERF	Synthetic Environment Research Facility
SIAA	Simulation Industry Association of Australia
SIMHUB	Simulation Hub (DSTO)
SIMMAN	Defence Simulation Manual
SIMPLE	Standard Interface for Multiple Link Evaluation
SIMTECT	Simulation Technology and Training Conference
SNE	Synthetic Natural Environment
SISO	Simulation Interoperability Standards Organisation
SOM	Simulation Object Model
SPG	Simulation Proposal Guide
SSA	Simulation Support to Acquisition
SSSSO	Simulation Support Services Standing Offer
STAGE	Scenario Toolkit and Generation Environment
STOW	Synthetic Theatre of War
TESS	Tactical Engagement Simulation System
TPM	Technical Performance Measure
TRM	Technical Reference Model
TRM FIG	Technical Reference Model Functional Interface Graphic
V&V	Verification and Validation
VAE	Virtual Air Environment
VMS	Virtual Maritime Systems
VV&A	Verification, Validation and Accreditation
WSSF	Weapon system Support Facility
WTSS	Weapons Training Simulation System

**Terms and Definitions:**

<b>Accreditation (Simulation)</b>	The official certification that a simulation, or federation of models and simulations is acceptable for use for a specific purpose.
<b>Accreditation Agent (Simulation)</b>	The organisation designated by the application sponsor to conduct an accreditation assessment for a simulation application.
<b>Accreditation Criteria</b>	A set of standards that a particular simulation, or federation of models and simulations must meet to be accredited for a specific purpose.
<b>Application</b>	The executing software on a host computer that models all or part of the representation of one or more simulation entities. The simulation application represents or “simulates” real-world phenomena for the purpose of training, or decision making. Examples include manned vehicle (virtual) simulators, computer-generated forces (constructive), environment simulators, and computer interfaces between a Distributed Interactive Simulation network and real (live) equipment.
<b>Application Sponsor (Simulation)</b>	The organisation that utilises the results or products from a specific simulation application.
<b>Architecture</b>	The structure of components in a program/system, their inter-relationships, and the principles and guidelines governing their design and evolution over time.
<b>Artificial Intelligence</b>	The effort to automate those human skills that illustrate our intelligence.
<b>Asset Management</b>	The management of those quantity of supplies, held or due in, which are subject to stock taking or accounting requirements
<b>Australian Defence Simulation Office</b>	Is a branch within the Australian Defence Headquarters with the roles of policy direction, collaboration and coordination of simulation activities across Defence. The branch has prime responsibility for developing and overseeing the implementation of Defence Simulation Policy and the Defence Simulation Plan.
<b>Base Object Model</b>	A single aspect of federation interplay that can be used as a building block of FOMs and SOMs.
<b>Battlespace</b>	Refers both to the physical environment in which the simulated warfare will take place and the forces that will conduct the simulated warfare. All elements that support the front line forces (eg., logistics, intelligence) are included in this definition of battlespace.
<b>Certification</b>	The determination that a process, vehicle, hardware or dataset meets a standard or pre-defined terms and conditions.
<b>Client/Server Model</b>	The model of interaction in a distributed system in which a program at one site sends a request to a program at another site and then awaits a response. The requesting program is called the client; the answering program is the server.
<b>Combat Modelling</b>	Any structural activity that is undertaken to represent

	higher level strategic guidance, doctrine operational concepts, concepts of operation and combat scenarios in terms of varying degrees of abstraction and reality.
<b>Common-Use Simulation</b>	Simulation applications, services, or materials provided by a Defence Group to two or more Defence Groups.
<b>Comparison With Development Data</b>	Comparison of common measures in the simulation to those obtained in a test of the system under controlled conditions.
<b>Comparison With Intelligence Data</b>	Comparison of the simulation output with collected intelligence data or intelligence analysis.
<b>Comparison With Operational Data</b>	Comparison of the simulation output with results of field exercises, operational test or actual system results.
<b>Compliant</b>	A simulation/simulator is compliant if it can send and receive data in accordance with the applicable IEEE Standards.
<b>Computer Aided Learning</b>	A method of instruction which uses computer technology to replace traditional text and classroom-based teaching.
<b>Computer Generated Forces</b>	A collection of unmanned battlefield entities under control as a unit. CGF replace or supplement friendly, enemy, or neutral manned simulators during a specific session. If a platform level simulation entity is directly controlled by a man in the loop it is a semi-automated force (SAF), if it is directly controlled by a computer it is an automated force (AF).
<b>Computer Generated Imagery</b>	This refers to the actual imagery, which is created by the computer image generation process.
<b>Confidence Building Approach</b>	Is concerned with ensuring that the simulation system adequately fits the simulation's end-users business and technical needs. The following three perspective's need to be considered: a) what softer, informal approaches might be appropriate; b) what formal standards and processes might be appropriate; and c) how to approach any residual concerns that might remain in order to build confidence in proceeding with the proposed simulation project.
<b>Configuration Management</b>	A discipline applying technical and administrative oversight and control to identify and document the functional requirements and capabilities of a simulation, control changes to those capabilities and document and report the changes.
<b>Constructive Model or Simulation</b>	In constructive simulations individuals generally stimulate (make inputs to the constructive models but they are not directly involved in determining the outcomes of the simulations. Constructive simulation are used typically in situations, such as combat engagement simulations for example, where participants seek to achieve a specified military objective given pre-established resources and constraints. They may also use engineering, cost and support models.
<b>Constructive Simulation</b>	In constructive Simulations individual generally stimulate (make inputs to) the constructive Models but they are not directly involved in determining the outcomes of the

	Simulations. Constructive Simulations are used typically in situations, such as combat engagement Simulations for example, where participants seek to achieve a specified military objective given pre-established resources and constraints. They may also use engineering, cost and support Models. Examples include wargames, models and analytical tools.
<b>Control Station</b>	Facility which provides the individual responsible for controlling the simulation and which provides the capability to implement simulation control.
<b>Data</b>	Representation of facts, concepts, or instructions in a formalised manner suitable for communication, interpretation or processing by humans or automatic means.
<b>Data Certification</b>	The determination that data have been verified and validated.
<b>Data Logger</b>	A device that accepts messages from the network and stores them for later replay in the same time sequence as the messages were originally received.
<b>Data Validation</b>	The documented assessment of data by subject area-experts and its comparison to known values.
<b>Data Verification</b>	Data verification is the use of techniques and procedures to ensure that data meets constraints defined by data standards and business rules derived from process and data modelling.
<b>Data Verification, Validation, and Certification</b>	The process of verifying the internal consistency and correctness of data, validating that it represents real world entities appropriate for its intended purpose or an expected range of purposes, and certifying it as having a specified level of quality or as being appropriate for a specified use, type of use, or range of uses.
<b>Database</b>	A collection of data, organised according to a schema to serve one or more applications. The term is generally applied to the geometrical information, which the image generator will process to produce an image. As a minimum, this will include polygons which are defined by the position of their corners (vertices) and some method of specifying colour. In more advanced systems the database will be in a hierarchical format and may include a number of other features such as texture, priority, shading etc.
<b>Database Management</b>	The process by which the real time system in the image generator can bring new portions of the database from the system disk as the eyepoint moves around the gaming area. The new data is taken from the available database into the active database.
<b>Dead Reckoning</b>	The process of extrapolating emulation 'entity' position/orientation based on the last known position/orientation, velocity, and (sometimes) higher-order derivatives of position versus time and/or other vehicle dynamic characteristics.
<b>Defence Information</b>	Is a complex and extensive collection of business-space

<b>Environment</b>	and battle-space information systems such as; communication, intelligence, surveillance, reconnaissance, electronic warfare and self protection, information operations, command and headquarters, and management, logistics, health and business systems. It includes interoperability with allies, industry and other government agencies.
<b>Defence Simulation Forum</b>	Is the peak coordinating body for simulation in Defence which provides a senior, unifying component of the management structure. It deals with the strategic issues impacting upon the development and use of computer-based modelling and simulation across the Defence Organisation. Membership is drawn at the one-star level from the principal stakeholder communities. Members guide Defence simulation policy direction, coordination and collaboration initiatives via the Director-General, Simulation (DGSIM) who chairs the forum. DSF members are responsible for ensuring that DSF decision are implemented within their Defence Group.
<b>Defence Simulation Plan</b>	
<b>Defence Simulation Policy</b>	
<b>Degree of Freedom</b>	Refers to the number of simultaneous directions or inputs a sensor can measure. Typically used to describe the combination of spacial positions (X, Y, Z) and orientation (roll, pitch, yaw)
<b>Distributed Interactive Simulation Compliant</b>	A Simulation/simulator that can send or receive PDUs in accordance with IEEE Standard 1278.
<b>Distributed Interactive Simulation Compatible</b>	Two or more Simulations/simulators that are DIS compliant and whose Models and data that send and interpret PDUs support the realisation of a common operational environment among the systems (ie, they are coherent in time and space).
<b>Distributed Interactive Simulation Interoperable</b>	Two or more Simulations/simulators that, for a given exercise, are DIS complaint and DIS compatible and whose performance characteristics support the Fidelity required for the exercise.
<b>Distributed Interactive Simulation</b>	A time and space coherent synthetic representation of world environments designed for linking the interactive, free play activities of people in operational exercises. The <i>Synthetic Environment</i> is created through <i>Real Time</i> exchange of IEEE 1278 compliant <i>Protocol Data Units</i> between distributed, computationally autonomous <i>Simulation</i> applications in the form of <i>Simulations</i> , <i>Simulators</i> , and instrumented equipment interconnected through standard computer communicative services. The computational Simulation Entities may be present in one location or may be distributed geographically.
<b>Distributed Interactive Simulation Compatible</b>	Two or more Simulations/simulators are DIS compatible if they are DIS compliant and their models and data that read and interpret Protocol data Units support the realisation of a common operational environment among the systems (coherent in time and space).

<b>Distributed Simulation</b>	A synthetic environment within which humans may interact through Simulation at multiple sites networked using complaint architecture, modelling, Protocols, standards and databases.
<b>Distributed Simulation Compatibility</b>	Two or more Simulations/simulators that are Compliant and those whose Models and data that send and interpret Simulation information support the realisation of a common operational environment among the systems (ie; they are coherent in time and space).
<b>Distributed Simulation Compliance</b>	A Simulations/simulators that can send or receive Simulation information in accordance with the defined standard (eg; IEEE 1278 for DIS and IEEE 1516 for HLA).
<b>Distributed Simulation Guide</b>	An ADSO document designed to assist the Acquirers, Developers, Managers, Supporters and Users of Simulations in giving an understanding of the concepts of Distributed Simulation technology and to provide guidance on its use in combining Australian Defence Simulations. It also provides guidance on Simulation Interoperability with our allies and coalition partners. The Guide points to more detailed sources of advice and technical information as required.
<b>Distributed Simulation Interoperability</b>	Two or more Simulations/simulators that, for a given exercise, are Compliant and Compatible and whose performance characteristics support the Fidelity required for the exercise.
<b>Embedded Simulation</b>	Simulations that are built into or added into operational systems to enhance capability.
<b>Emulation</b>	A simulation methodology in which the same inputs are accepted and the same outputs are produced as a given system.
<b>Emulator</b>	A device, computer program, or system that performs emulation.
<b>Engagement Level of Simulation</b>	The engagement level is focussed on the evaluation of system effectiveness against enemy systems. These simulations typically help to analyse Measures Of Effectiveness (MOE) at the system-on-system level.
<b>Entity</b>	Entities refer to those identifiable individual components within a simulation. An entity might be a platform (ship, submarine, and aircraft), a munition (missile, torpedo), a human being, or any other component that interacts with the simulation.
<b>Environment</b>	The physical surroundings such as land, sea, air, space and associated space-time region, which characterise the channel or conduit for real interaction between resources.
<b>Experimentation</b>	The application of the structure and methods of experimental science to support the understanding and determination of future defence capability via the exploration of novel future concepts and contexts to illuminate a pathway from today's Defence force towards tomorrow's Defence needs.
<b>Federate</b>	A member of a High Level Architecture Federation. All

	applications participating in a Federation are called Federates. This may include Federation managers, data collectors, real world ('live') systems (eg; C4I systems, instrumented ranges, sensors), Simulations, passive viewers and other utilities.
<b>Federation</b>	A system of interacting models and/or simulation, with supporting infrastructure, based on a common understanding of the objects portrayed in the system.
<b>Federation Element (or federate)</b>	Term applied to an individual simulation that is part of a federation. Federation elements may be distributed.
<b>Federation Execution</b>	The actual operation, over time, of a subset of the Federates and the Runtime Infrastructure initialisation data taken from a particular Federation. It is the step where the executable code is run to conduct the exercise and produce the data for the measures of effectiveness for the Federation Execution.
<b>Federation Execution Data</b>	Information derived from the Federation Object Model (class, attribute, parameter names, etc.). Each Federation Execution needs one. In the abstract, creation of a Federation Execution is simply the binding of a Federation Execution name to a Federation Execution Data. The organisation of Federation Execution Data will become the subject of standard so Federate Object Modes tools can automatically generate them for any vendor's Run Time Infrastructure.
<b>Federation Object Model</b>	An identification of the essential classes of objects, object attributes, and object interactions that are supported by a High Level Architecture Federation. In addition, optional classes of additional information may also be specified to achieve a more complete description of the Federation structure and/or behaviour.
<b>Fidelity</b>	The accuracy of the representation when compared to the real world.
<b>FOM Agility</b>	The ability to switch between FOMs with ease.
<b>HEADLINE</b>	Army experimental program.
<b>HEADMARK</b>	Navy experimental program
<b>HEADMASTER</b>	Joint experimental program
<b>HEADWAY</b>	Air Force experimental program
<b>High Level Architecture</b>	Major functional elements, interfaces, and design rules, pertaining as feasible to all DoD Simulation applications, and providing a common framework within which system architectures can be defined.
<b>High Level Architecture Substantive Interoperability</b>	Is driven by the need of the Federation and has to be addressed by each Federation in a Federation specific way.
<b>High Level Architecture Technical Interoperability</b>	The capability of Federates to physically connect and exchange data in accordance with the HLA standard.
<b>Information Operations</b>	Continuous military operations within the military information environment that enable, enhance and protect the friendly force's ability to collect, process and act on information to achieve an advantage across the full range

	of military operations. Information operations include interacting with the global information environment and exploiting or denying and adversary's information and decision capabilities.
<b>Information Warfare</b>	Actions taken to achieve information superiority by affecting an adversary's information, information based processes, information systems and computer based network's while defending ones own information, information based processes, information systems and computer based networks.
<b>Interconnectivity</b>	The linking together of interoperable systems.
<b>Interoperability</b>	The ability of systems, units of forces to provide services to and accept services from other systems, units or forces and to use the services so exchanged to enable them to operate effectively together.
<b>Key Defence Simulation Appointment</b>	Is any Defence appointment (regardless of workforce mix type) that as a matter of normal business (once per week), carries out any one or more of the five Simulation Roles (ie; simulation acquirer, simulation developer, simulation manager, simulation user and simulation supporter).
<b>Knowledge Warfare</b>	A person must be able to comprehend what has happened and why. If he can master this interaction, he employs knowledge warfare, which rivals information warfare in importance. While the latter is data, the former is how to use the data to ones advantage.
<b>Live Simulation</b>	Traditionally having a training focus, live simulations represent military operations using military personnel and equipment in which simulated experiences are achieved using near-combat conditions. The advances of computer-based simulation support is enriching this field, enabling real time data collection and exercise control, including the real-time insertion of virtual simulations to stimulate live responses (eg; computer controlled targets on live-firing ranges, EW threat/missile engagement scenarios).
<b>Live, Virtual and Constructive Simulation</b>	The categorisation of simulation into live, virtual and constructive is problematic, because there is no clear division between these categories. The degree of human participation in the simulation is infinitely variable, as is the degree of equipment realism. This categorisation of simulations also suffer by excluding a category for simulate people working real equipment (eg; smart vehicles). See live, virtual and constructive definitions.
<b>M&amp;S Interpretability</b>	The ability of a Model or Simulation to provide services to and accept services from other Models and Simulations, and to use the services so exchanged to enable them to operate effectively together.
<b>Major Simulation</b>	A simulation which includes but is not limited to, one whose intended application will require accreditation by Defence policy; that will be an element of a federation of models and simulations; that is intended for reuse; whose application involves safety of life; and, whose development will involve the commitment of significant

	Defence resources.
<b>Mission/Battle Level of Simulation</b>	The mission/battle level is focussed on the effectiveness of a force or multiple platforms performing a specific mission. These simulations typically help to analyse MOE at the force-on-force level. Occasionally, such MOE have been referred to as Measures of effectiveness.
<b>Model</b>	A physical mathematical or otherwise logical representation of a system, entity, phenomenon, or process.
<b>Modelling and Simulation</b>	The development and use of live, virtual, constructive and smart models including simulators, stimulators, emulators, and prototypes to investigate, understand, or provide experiential stimuli to either (1) conceptual systems that do not exist or (2) real life systems which cannot accept experimentation or observation because of resource, range, security, or safety limitations. This investigation and understanding in a synthetic environment will support decisions in the domains of research, development, and acquisition and analysis, or transfer necessary experiential effects in the education, training, and military operations domain.
<b>Necessary Bandwidth</b>	For a given class of emission, the minimum value of the occupied bandwidth sufficient to ensure the transmission of information at the rate and with the quality required for the system employed under specified conditions. Emissions, useful for the good functioning of the receiving equipment as, for example, the emission corresponding to the carrier of reduced carrier systems, shall be included in necessary bandwidth.
<b>Protocol</b>	A set of rules and formats (semantic and syntactic) that define the communication behaviour of Simulation applications.
<b>Protocol Data Unit</b>	Distributed Interactive Simulation terminology for a unit of data that is passed on a network between Simulation applications.
<b>Qualification</b>	The determination that personnel posses the necessary skill set, knowledge and experience to undertake specific duties or tasks.
<b>Real Time</b>	In Modelling and Simulation, simulated time advances at the same rate as actual time; for example, running the Simulation for one second results in the Model advancing time by one second. Contrast with: fast time; slow time.
<b>Real World</b>	The set of real or hypothetical causes and effects that Simulation technology attempts to replicate. When used in a military context, the term is synonymous with real battlefield to include air, land and sea combat.
<b>Recurrent Fidelity Evaluation</b>	Evaluation accomplished periodically to ensure that the simulator retains the fidelity of the real world system.
<b>Resolution</b>	The degree of detail and precision used in the representation of real world aspects in a model or simulation. More specifically, resolution is used as a measure of the ability to delineate picture detail.

<b>Reuse</b>	The ability to create models, simulations and associated databases once and use many times.
<b>Revolution in military affairs</b>	A combination of rapid technological, organisational and doctrinal innovations which, together, prompt a revolutionary change in the conduct of military operations. The current revolution in military affairs has been sparked by the explosive development and exploitation of information and computer technologies.
<b>Run Time Infrastructure</b>	The general purpose distributed operating system software that provides the common interface services during the runtime of a High Level Architecture Federation.
<b>Simulation</b>	The method for implementing a model over time.
<b>Simulation Acquirer</b>	Those who procure simulations, with a focus on major and minor projects, including requirements analysis. They also administer the development of simulations.
<b>Simulation Application Area</b>	The Defence Simulation Policy (DI(G) OPS 4-12) identifies nine simulation application areas that can be utilised to describe the use of simulation within Defence. These are: Training, Force Assessment, Experimentation, Research and Development, Acquisition, Life-Cycle Management, Crisis Management and Planning, Mission Rehearsal, and Conduct of Operations.
<b>Simulation Class</b>	Simulations can be divided into four classes. These are: Constructive, Virtual, Live and Smart. Specific definitions of these classes are contained within the glossary.
<b>Simulation Coordination Group</b>	Each Defence Group represented on the DSF is to establish a Simulation Coordination Group (SCG) The role of the SCGs is to guide the development of simulation activities within each Defence Group. Each SCG is to be of a size, level, structure and composition appropriate to the current and planned involvement in simulation activities by that Group. In particular, SCGs may be either an extant organisation or a committee of representatives drawn from throughout the Defence Group.
<b>Simulation Developer</b>	Those who develop simulations including design and programming. They do not only build the initial base level capability, but all subsequent levels of capability as well.
<b>Simulation Environment (Defence)</b>	Includes all aspects of Defence simulation as bounded by the Defence Simulation Policy DI (G) OPS 42-1. This includes all Defence simulation policy, process, people, infrastructure, data, hardware/software, and supporting tools.
<b>Simulation Environment (Group)</b>	Includes all simulations, people, data, tools, standards and infrastructure that support individual Group simulation activities. Each individual Group Simulation Environment (eg; DPE, DSTO, DMO, Navy, Air Force and Army) largely supports tactical levels.
<b>Simulation Environment</b>	Includes all simulations, people, data, tools, standards and

<b>(Joint)</b>	infrastructure that support Joint ADF simulation activities. The support (simulations, people, data, tools, standards, and infrastructure) provided from other Defence Groups to these activities is also encapsulated within the Joint Simulation Environment.
<b>Simulation Environment (Service)</b>	Includes all simulations, people, data, tools, standards and infrastructure that support individual service simulation activities. Each individual Service Simulation Environment (ie; Navy, Air Force and Army) largely supports tactical levels. The support (simulations, people, data, tools, standards, and infrastructure) provided from other Defence Groups to these activities is also encapsulated within the Service Simulation Environment.
<b>Simulation Expert</b>	Someone with deep expertise in one or more particular aspects of simulation.
<b>Simulation for ‘Acquisition’</b>	Simulation for acquisition helps Defence determine and refine user requirements, systems design, prototyping and system test and evaluation for procurement decision purposes, technical regulatory purposes, assessment of fitness for purpose and engineering support and analysis.
<b>Simulation for ‘Conduct of Operation’</b>	Simulation assists the conduct of operations with ‘just-in-time’ planning information, providing real-time (or very near real-time) decision support to military operators during military operations via the rapid performance of course-of-action analysis; applicable to strategic, operational and tactical levels of command.
<b>Simulation for ‘Crisis Management and Planning’</b>	In the area of crisis management and planning, simulation supports deliberate planning for potential/plausible future crisis scenarios; collaborative planning activity that can include participation by distant distributed teams of specialists; analytical support to the immediate planning approach of the Joint Military Appreciation Process; and the determination of logistics support requirements associated with possible future military operations. This application area also includes simulations used for analysis of business processes, finances and workforce planning.
<b>Simulation for ‘Experimentation’</b>	See definition of Experimentation. It is also considered to cover an experimental approach to providing analytical support to the force-in-being including development and testing of doctrine and tactics, systems evaluation and improvement. In this application area, simulation helps Defence to learn about doing novel ‘things’ that may prove to be better than current available means for achieving outcomes.
<b>Simulation for ‘Force Assessment’</b>	Simulation for force assessment supports decision making in the areas of capability and force structure analysis, including preparedness and resourcing studies from tactical operations, operational and theatre levels through to campaign and strategic levels.
<b>Simulation for ‘Lifecycle Management’</b>	In the area of life-cycle management, simulation helps Defence conduct resource planning and allocation for

	sustaining military systems through-life. It is not only an adjunct to the acquisition process, but also an essential ingredient to the logistics and maintenance support activities from planning to operations.
<b>Simulation for ‘Mission Rehearsal’</b>	Simulation for mission rehearsal may be thought of as ‘just-in-time’ training. Therefore the scope of simulation mentioned for Simulation for ‘Training’ applies equally for mission rehearsal, with the significant added demands of specifically developing essential skills for a real and imminent operation.
<b>Simulation for ‘Research and Development’</b>	Simulation for research and development supports both the analysis and the synthesis of military systems encompassing the full spectrum from technical components to overall “systems of systems”. In this application area, simulation supports operational and technical analysis within and across all dimensions of the fundamental inputs to capability.
<b>Simulation for ‘Training’</b>	Simulation for training covers the routine development of essential skills across all rank levels and all specialties by individual training and collective single service training, joint and combined training and through e-learning. Live, virtual and constructive simulations plus combinations of any of these might be employed.
<b>Simulation Game</b>	A simulation in which the participants seek to achieve some agreed upon objective within an established set of rules. For example, a management game, a war game. Note: The objective may not be to compete, but to evaluate the participants, increase their knowledge concerning the simulated scenario, or achieve other goals.
<b>Simulation Generalist</b>	Someone with general awareness and understanding of the relevant aspects of simulation.
<b>Simulation Interoperability</b>	The ability of simulations to provide services to and accept services from other simulations and to use the services so exchanged to enable them to operate effectively together. Two or more simulations/simulators are interoperable for a given exercise if they are compliant, compatible, and their performance characteristics support a fair fight to the fidelity required for the exercise.
<b>Simulation Manager</b>	Those who manage a simulation or an organisation that uses or relies on simulation.
<b>Simulation Object Model</b>	A specific of the intrinsic capabilities that an individual Simulation offers to Federations. The standard format in which SOMs are expressed provides a means for Federation developers to quickly determine the suitability of Simulation systems to assume.
<b>Simulation Proposal Guide</b>	A document designed to assist developers of Simulation proposals, and those reviewing and assessing those proposals, to establish clearly how the Simulation will enhance capability, save resources or reduce risk to develop, train for, prepare for and test military options for Government.

<b>Simulation Role</b>	The different ways that people can be involved in simulation – as a developer, an acquirer, a manager, a user, or a supporter of simulation.
<b>Simulation Specialist</b>	Someone with some or considerable expertise in a particular aspect of simulation.
<b>Simulation Supporter</b>	Those who maintain or support simulations to the level of capability as accepted by the Simulation Manager from the Simulation Acquirer. This includes provision of technicians, logistics, people and data. This category also includes those who train others in simulation topics including how to build and run them.
<b>Simulation User</b>	Those who use simulations, in an application area, and require more than a basic awareness of simulation to do this effectively. Those users who only require a basic understanding of simulation to use it, eg. soldiers in a weapons simulation trainer, are not included in this category.
<b>Simulator</b>	A device which employs simulation to replace a real world system or apparatus, eg for training purposes. A simulator generally has three elements – a modelled process which represents the real world system, a control system, and a man-machine interface.
<b>Smart Simulations</b>	Systems of simulated people and real equipment. For example, DSTO has completed several projects on penetrating injuries where simulated-instrumented people (ie; dummies) were exposed to live fire.
<b>Stimulate</b>	To provide input to a system in order to observe or evaluate the system's response.
<b>Stimulation</b>	Stimulation is the use of simulations to provide an external stimulus to a system or subsystem. An example is the use of a simulation representing the radar return from a target to drive (stimulate) the radar of a missile system within a hardware/software-in-the-loop simulation.
<b>Stimulator</b>	a. A hardware device that injects or radiates signals into the sensor system(s) of operational equipment to imitate the effects of platforms, munitions, and environment that are not physically present; b. a battlefield entity consisting of hardware and/or software modules that injects signals directly into the sensor systems of an actual battlefield entity to simulate other battlefield entities in the virtual battlefield.
<b>Synthetic Environment</b>	The linkage of models, simulations, people (real or simulated), equipment (real or simulated) into a common representation of the world.
<b>Synthetic Environment (Group)</b>	The linkage of Defence Group models, simulations, people (real or simulated), equipment (real or simulated) into a common representation of the world. Defence Groups may have multiple Synthetic Environments.
<b>Synthetic Environment (Joint)</b>	The linkage of ADF models, simulations, people (real or simulated), equipment (real or simulated) into a common representation of the world. There may be multiple Joint

	Synthetic Environments.
<b>Technical Level of Simulation</b>	The technical level, which incorporates engineering simulations, is focussed on design, cost, manufacturing and supportability. These simulations typically help to analyse Measures Of Performance of components in the capability system.
<b>Theatre Level of Simulation</b>	The theatre level is focussed on the outcomes of joint forces in a theatre level conflict. These simulations typically help to analyse Measures Of Outcome (MOO).
<b>Validation (Simulation)</b>	The process of determining the degree to which a simulation is an accurate representation of the real-world from the perspective of the intended uses of the simulation.
<b>Validation Agent</b>	The organisation designated by the simulation sponsor to perform validation of a simulation, or federation of simulations.
<b>Validity</b>	The quality of maintained data that is found on an adequate system of classification (eg; data model) that is rigorous enough to compel acceptance.
<b>Verification (Simulation)</b>	The process of determining that a simulation implementation accurately represents the developer's conceptual description and specifications.
<b>Verification Agent</b>	The organisation designated by the simulation sponsor to perform verification of a simulation, or federation of simulations.
<b>Virtual Modelling and Simulation</b>	Virtual simulations inject humans in the loop to exercise motor control, decision-making, or communication skills. The human element of a virtual simulation is not modelled. The simulated systems in virtual simulations would be made up of constructive models. Examples include individual aircraft (or weapons system) simulators and virtual prototypes.
<b>Virtual Prototyping</b>	A more recent form of human-in-the-loop simulation is virtual prototyping. In this realm, a three-dimensional electronic, virtual mock-up, of a system is created. This virtual prototype allows an individual to interface with a synthetic environment.
<b>Virtual Simulation</b>	Virtual Simulations inject humans in the loop to exercise motor control, decision-making, or communications skills. The human element of a virtual Simulation is not modelled. The simulated systems in virtual Simulation would be made up of constructive Models. Examples include individual aircraft (or weapon system) simulators and virtual prototypes.
<b>War Game</b>	A simulation by whatever means, of a military operation involving two or more opposing forces, using rules, data and procedures designed to depict an actual or assumed real life situation.