



SKA1 SDP GLOSSARY

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1 Purpose of Document

This document provides a list of acronyms, abbreviations and terms used in the Science Data Processor Consortium CDR document release. Note that there can be duplicate abbreviations, e.g. QA, and it is up to the author to disambiguate.

2 Acronyms and Abbreviations

Acronym or Abbreviation	Expansion
AA	Aperture Array
AAAI	Authorization, Authentication, Access and Identification
AIV	Assembly Integration and Verification
ALMA	Atacama Large Millimetre / Submillimetre Array
API	Application Programming Interface
APM	Astrometric Performance Metric
APU	Accelerated Processing Unit
AR	Acceptance Review
AR1 ..	Array Release 1
ARL	Algorithm Reference Library
AS	Australian Standard
ASKAP	Australian Square Kilometre Array Pathfinder
ATP	Acceptance Test Plan
AZ	Availability Zone
BDA	Baseline Dependent Averaging
BDD	Block Definition Diagram

BGP	Border Gateway Protocol
BMC	Baseboard Management Controller
C&C	Component and Connector
CA	Consumer App or Certification Authority
CAOM	Common Archive Observation Model, now at version 2, a product of the Canadian Astronomy Data Centre
Capex	Capital Expenditure
CAS	Common Algorithm Software
CASA	Common Astronomy Software Applications (short for the software package, see below)
Casacore	A suite of programs for radio astronomy data processing
CBF	Correlator Beamformer
CDR	Critical Design Review
CERN	The European Centre for Nuclear Research
CI	Configuration Item
CISPR	International Electrotechnical Commission
CLEAN	A computational algorithm designed to perform a deconvolution on images
COTS	Commercial Off The Shelf
CPU	Central Processing Unit
CSP	Central Signal Processor (consortium of SKA)
CTDS	Casacore Table Data System
CTRL	Control
DALiuGE	Data Activated Liu Graph Engine

DB	Database
DBA	Database Administrator
DDE	Direction-Dependent Effects
DDR4	Double Data Rate 4 th generation dynamic random access memory
DFT	Discrete Fourier Transform
DM	Dispersion Measure
DOS	Denial of Service
DP	Double Precision Floating Point
DSH	Dish (consortium of SKA)
DSL	Domain Specific Language
DSM	Dynamic Spectrum Mode
DWDM	Dense Wavelength-Division Multiplexing
ECSS	European Cooperation for Space Standardisation
EGI	European Grid Infrastructure
EIA	Environmental Impact Assessment
EMC	Electromagnetic Compatibility
EMI	Electromagnetic Interference
EoR	Epoch of Re-ionisation
EPA	Environmental Protection Agency
EPEL	Extra Packages for Enterprise Linux
FDR	Infiniband Fourteen Data Rate
FFT	Fast Fourier Transform

FITS	Flexible Image Transport System: an open standard defining a digital file format for storage, transmission and processing of scientific images. Several formats have been created based on FITS.
FLOP / FLOPS	Floating Point Operations / Floating Point Operations per Second
FMEA / FMECA	Failure Modes and Effects Analysis / Failure Mode Effect Criticality Analysis
FOV	Field Of View
FPGA	Field-Programmable Gate Array
GbE	Gigabit Ethernet
GPGPU	General Purpose Graphical Processing Unit
GPU	Graphics Processing Unit
GridFTP	GridFTP is a high-performance, secure, reliable data transfer protocol optimized for high-bandwidth wide-area networks.
GSM	Global Sky Model
GUI	Graphical User Interface
GW	Gravitational Wave
HAL	Hardware Abstraction Layer
HCA	Host Channel Adapter
HDF5	Hierarchical Data Format (version 5) designed to deal with large volumes of numerical data
HI	Neutral atomic hydrogen
HPBW	Half Power Beam Width
HPC	High Performance Computing, sometimes described in terms of national facilities
HPSO	High Priority Science Objective
HSM	Hierarchical Storage Management

HTTP	Hypertext Transfer Protocol
IAM	Identity and Access Management
ICD	Interface Control Document
ICRAR	International Centre for Radio Astronomy Research
ICT	Information Communication Technology (e.g. in reference to the industry)
IdP	Identity Provider
iFFT	Inverse Fast Fourier Transforms
ILS	Integrated Logistics Support
ImageDM	Image Data Model, a data model standard defined by the IVOA
I/O	Input / Output
IP	Internet Protocol / intellectual Property
IPMI	Intelligent Peripheral Management Interface
ISO	International Standards Organisation
IVOA	International Virtual Observatory Alliance
IXR	Intrinsic Cross-polarisation Ratio
JVLA	Jansky Very Large Array
LAN	Local Area Network
LFAA	Low Frequency Aperture Array
LHC	Large Hadron Collider (CERN)
LML	Lifecycle Modeling Language
LoC	Lines of Code / Latency-optimised Cores
LOFAR	Low-Frequency Array (radio telescope)

LRU	Line Replaceable Unit
LSM	Local Sky Model
MAID	Massive Array of Idle Drives
MeerKAT	64-dish Karoo Array Telescope
MJD	Modified Julian Date
MIL-STD	Military Standard
MLC	Multi-Level Cell
MOTS	Modified-Off-The-Shelf software
MPI	Message Passing Interface - a standardized and portable message-passing standard; a communication protocol for programming parallel computers.
MPLS	Multi-Protocol Label Switching
MS / MSv3	Measurement Set (e.g. MSv3)
MTBF	Mean Time Between Failure
MTU	Maximum Transmission Unit
MTR	Metrics
MTTR	Mean Time to Repair
MWA	Murchison Widefield Array
NEMA	National Environment Management Act (South Africa, Act 1998)
NIC	Network Interface Controller
NOHSC	National Standard for Occupational Noise
NRAO	National Radio Astronomy Observatory (US)
NREN	National Research and Education Network
NSDN	Non-Science Data Network

NVME	Non-volatile Memory Express
NVRAM	Non-volatile Random Access Memory
NZS	New Zealand Standard
ObsCore	Observation Data Model Core Components, a data model standard defined by the IVOA
OCLD	Optimised Candidate List and Data
OHS	Occupational Health and Safety
OL	Offline
ODT	Apache Object Oriented Data Technology
Opex	Operational Expenditure
OPM	Polarimetric Performance Metric
ORR	Operational Readiness Review
OS	Operating System
OST	Observatory Support Tools
OTS	Off-The-Shelf
PA	Producer App
PAF	Phased Array Feeds
PB	Petabyte
PBS	Product Breakdown Structure
PCI	Peripheral Component Interconnect
PCIe	Peripheral Component Interconnect Express
PCM	Phase-Change Memory
PDR	Preliminary Design Review
PDU	Power Distribution Unit

PFS	Parallel File System
PHS&T	Package, Handling, Storage and Transport
PI	Principal Investigator
PPM	Photometric Performance Metric
PS	Persistent Storage
PSS	Pulsar Search Sub-system
PSF	Point Spread Function
PSRFITS	A standard FITS-based format for pulsar data files
PST	Pulsar Timing Sub-system
QA	Quality Assessment in terms of SDP engineering. Also Quality Assurance
QAS	Quality Attribute Scenario (a SEI concept)
QoS	Quality of Service
QPI	QuickPath Interconnect
QR	Qualification Review
QTP	Qualification Test Plan
R_{max}	Sustained Performance
R_{peak}	Peak Performance
RA	Requirements Analysis
RAM	Reliability Availability Maintainability (analysis)
RB	Requirements Baseline
RBD	Reliability Block Diagrams
RDMA	Remote Direct Memory Access

REQ	Requirement
REST	Representational State Transfer Technology: an abstraction of the WWW architecture with a particular style and set of constraints. Web services are sometimes described as 'RESTful.'
RFI	Radio Frequency Interference
RMR-NIC / RNIC	RDMA Network Interface Card
ROM	Rough Order of Magnitude (used in estimation)
RPM	Radiometric Performance metric
RT	Real time (as opposed to OL, offline)
SaDT	Signal and Data Transport (consortium of SKA)
SAFe	Scaled Agile Framework
SANS	South African National Standard
SAML	Security Assertion Markup Language
SATA	Serial ATA
SDM	Science Data Model
SDN	Software-Defined Network(ing)
SDP	Science Data Processor / Software Development Plan
SEI	Software Engineering Institute, whose processes the SDP has been following in software design
SEP	Software Engineering Plan
SIA	Simple Image Access,a protocol associated with the IVOA
SIB	Standards Information Base
SIN	Sine projection
SKA	Square Kilometre Array

SKA1_Low	A phased array of simple dipole antennas to cover the frequency range 50 to 350 MHz
SKA1_Mid	An array of dish antennas to cover the frequency range 350 MHz to 14 GHz
SKAO	SKA Office (sometimes called SKA Headquarters). This is located in Jodrell Bank, UK.
SMF	Single-Mode Optical Fibre
S/N	Signal to Noise
SoC	System on a Chip
SODA	Server-side Operations for Data Access, a protocol associated with the IVOA
SP	Single Precision Floating Point
SPEAD	Streaming Protocol for Exchanging Astronomical Data
SpectralIDM	Spectral Data Model, a data model standard defined by the IVOA.
SPOCLD	Single Pulse Optimised Candidate List and Data
SPM	Spectrometric Performance Metric
SRC	SKA Regional Centre
SSA	Simple Spectral Access, a protocol associated with the IVOA
SSD	Solid State Disk
SSH	Secure Shell
SUITP	Software [Unit/Integration] Test Plan
SWE	Software Engineering
SysML	Systems Modelling Language
TANGO	TaCO Next Generation Objects - an object-orientated control system used in communications between TM and SDP
TAP	Table Access Protocol, a protocol associated with the IVOA

TB	Terabyte
TBC	To Be Confirmed
TBD	To Be Decided / Determined / Defined
TCD	Telescope Configuration Data
TCP/IP	Transmission Control Protocol / Internet Protocol
TDD	Test Driven Development
TEC	Total Electron Content
TM	Telescope Manager (consortium of SKA)
TMC	Telescope Monitoring and Control (relates to TM)
TOA	Time of Arrival
ToO	Target of Opportunity
TS	Technical Specification
ToR	Top of Rack
UDP/IP	User Datagram Protocol / Internet Protocol
UML	Unified Modeling Language
VDIF	VLBI Data Interchange Format
VLAN	Virtual LAN
VLBI	Very Long Baseline Interferometry
VM	Virtual Machine
VO	Virtual Observatory
VOEvent	An XML standard used to report astronomical events, adopted by the IVOA
VOTable	An XML standard for the interchange of data represented as a set of tables

VPN	Virtual Private Network
X.509	A standard for certification systems
WA	Western Australia
WAN	Wide Area Network
WBS	Work Breakdown Structure
YoT	Year On Telescope

3 Terms

Term	Definition
Accelerator	A specialised type of computer processor that allows high bandwidth and/or parallel processing. Typically refers to a GPU.
Apache Spark	Apache Spark is an open-source distributed general-purpose cluster-computing framework.
Architecture	Architecture and software architecture are synonymously used for the combination of system and domain specific application architecture.
Automatic code generation	Generation of source code with a tool from a model.
Base (numerical)	See note below under Gigabyte.
Baseline	This has three broad meanings within the SDP and these must be determined by context (planning term, SKA phase, interferometry term).
Baseline Design	Initial design parameters for the first instance of the SDP. These are captured in the document: SKA-TEL-SKO-DD-001 System Baseline Design.
Baseline-Dependent Averaging	Allows differing integration periods for different baseline lengths.
Batch	Batch processing is opposed to real-time processing, and was at one time called offline. Typically this is where data is retrieved from the buffer for processing.
Buffer	Accumulates visibility data after the ingest pipeline for use in subsequent processing. A type of storage.
Calibration	Calibration has several context-dependent meanings for the SDP, and this should be elaborated in the specific document to which it applies.
Capability	A grouping of sub-system elements that map directly to a particular science mission or engineering task. This term has been superseded but

	was used heavily during the design process. It is still used by other consortia.
Centi-SDP	A scaled-down system to roughly 1% of the full SDP system for SKA1 (in terms of FLOPS).
Code coverage	Percentage of the software that has been executed (covered) by the test suite.
Commensal observation	Running more than one set of data reductions on the same set of data, eg. running the same input data through the spectral line pipeline and continuum pipeline at the same time. This contrasts with sub-arraying.
Common Algorithmic Software	The collection of domain-specific algorithmic software that is shared between pipelines.
Components*	The principal computational elements and data stores that execute in a system.*
Component and Connector (C&C) style*	A kind of style that introduces a specific set of component and connector types and specifies rules about how elements of those types can be combined. Additionally, given that C&C views capture runtime aspects of a system, a C&C style is typically also associated with a computational model that prescribes how data and control flow through system designed in that style.*
Computational efficiency	The percentage of the theoretically available processing power (see peak performance) that can be achieved for useful processing (see sustained performance). Depends on hardware, application and implementation.
Compute Platform	The collection of hardware systems in the Science Data Processor and the software and services required to efficiently use these systems.
Compute Rack	A self-contained resource pool that can be procured as a unit.
Conditioning	Manipulating the data to make it useable by subsequent steps in a pipeline.
Configuration Database	The Configuration Database is an intermediate store for control information relating to SDP components, tracking the dynamic configuration of the SDP.

Configuration Item	A Configuration Item (CI) is a significant component of the project selected to be put under configuration control.
Connector*	See Component. A runtime pathway of interaction between two or more components.*
Construction Phase	The phase of SKA development following the Pre-construction (design) Phase and ending with fully integrated and accepted telescope systems.
Continuum Imaging	The production of a continuum image.
Continuum Pipeline	A pipeline to produce a continuum data product.
Correlator product	Output of the CSP correlator. Mainly a matrix comprised of cross-multiplied antenna or station products, commonly referred to as visibilities.
DALiuGE	DALiuGE is a workflow graph execution framework, specifically designed to support very large scale processing graphs for the reduction of interferometric radio astronomy data sets.
Dask	Dask is a flexible library for parallel computing in Python.
Data Delivery Platform / Delivery Platform	A software stack whose purpose is to transfer Data Products to the OST user or to a SKA Regional Centre. It enables the user to query and request data, and allows for the transfer of the requested data.
Data Driven	This means that a Data Object with a managed data life cycle can trigger an action when changing state.
Data Island	A Data Island is a logical construct with the responsibility for storing data used and produced by Execution Engine instances by providing a unique namespace for access.
Data Models	Schematics showing relationships between Data Entities or Data Objects.
Data Product / Science Data Product	See SDP Data Product.
Data Queues	The Data Queues component handles medium-rate real-time information such as calibration solutions, alerts or Quality Assessment data exchanged between model databases, processing and Quality Assessment. See Operational_System_CC_view.

DataLink	Datalink is an IVOA protocol which defines a new category of services. This allows linking to datasets with various resources such as other related datasets, metadata or other services
Double Buffering / Multiple Buffering	The use of two or more buffers in alternating roles. For example, while buffer A is used to store data, buffer B is used to access data for processing.
Drift scan	A technique which involves a continuously changing pointing centre and stepwise changing phase centres, with the whole field then jointly deconvolved.
ECSS-E-ST-40C	This document from ECSS defines the principles and requirements applicable to space software engineering.
ECSS-M-ST-40C	This document from ECSS defines the configuration management and information/documentation requirements for space projects. The document is structured into two main parts, the first part presenting the processes and the second one providing the detailed requirements.
Element*	An architecture building block native to a style. An element can be a module, a component, or a connector, or an element in the architecture of a system.*
Eventually Consistent Replication	A model used in distributed computing to achieve high data availability.
Execution Control	All processing is steered by Execution Control, which provides the top-level TANGO control interface in terms of attributes and commands to the Telescope Manager.
Execution Engine	The component that initiates and coordinates functionality required for the execution of science pipelines. An Execution Engine is a logical construct enabling scalability and parallelism in processing. An Execution Engine is specifically a (configured) software instance, such as a Dask Programming running in a distributed fashion.
Execution Framework	Execution Frameworks are software packages (modules), possibly adapted to our architecture (e.g. implement the Execution Framework interface and Processing Wrappers).
Faceted algorithm / Faceting	An algorithm that is able to synthesise data from non-coplanar telescope baselines (such as may result from the Earth's curvature or rotation).

Filterbank	An array of FIR (Finite Impulse Response) filters feeding into a FFT that splits a broadband signal into narrowband channels.
Gigabyte / GB	In the SDP base 10 is used. 1 Gigabyte is 1,000,000,000 bytes
Gibibyte / GiB	1 Gibibyte is 2^{30} bytes = 1,073,741,824 bytes https://en.wikipedia.org/wiki/Binary_prefix
Global Sky Model	The overall source catalogue for observations. The SDP maintains the GSM database.
Gridding	The process by which visibilities, which may be measured at any real position in the <i>uv</i> -plane, are aggregated or interpolated to discrete grid positions so that the (inverse) FFT may be computed.
High Performance Computing	Generally, computing at the forefront of contemporary available processing capacity.
Image cube	3D images with spatial coordinates as the two first axes and the frequency (velocity channels) as third axis.
Infiniband	A type of high-throughput network link typically used in high-performance computing systems and supercomputers.
Ingest Processing	The processing required to ingest data into the SDP.
Integration testing	Testing in which software components, hardware components, or both are combined and tested to evaluate the interaction between them.
Interconnect System	The complex interconnects between the various components of the SDP. This relates to the Hardware Abstraction Layer.
Intermediate Data Product	A data product created during pipeline processing which has limited duration, and is not stored as a SDP Data Product in the SDP Data Product Catalogue.
Kanban	A quality improvement methodology.
Linux Containers	An instance of an OS Container. Provides an operating system-level isolation method for running multiple isolated Linux systems that have their own process and network spaces.

Local Sky Model	A subset catalogue for the observation being processed of the overall source catalogue, see Global Sky Model.
Logical model	Implementation-independent model of software items used to analyse and document software requirements.
Long Term Storage	Previously known as the Long Term Archive, (Science) Data Archive, or Archive, this is where data is stored. It stores the Science Data Products.
Low-latency interconnect	A network infrastructure optimised for low-latency communication, rather than high throughput. Example: Infiniband.
Lossless compression	Any data reduction technique that allows the original input data to be perfectly reconstructed.
Lossy compression	Any inexact data reduction technique; i.e. that approximates the original input data in a way that is not reversible.
Major cycle	An iteration of continuum image deconvolution that transforms observed visibilities to the image domain, fits a sky model and transforms the model back to the visibility domain in order to produce residual visibilities as input to the next iteration.
Master Controller	The Master Controller is responsible for the control of top-level non-processing components and all sub-components of the SDP. It is needed to ensure that the appropriate emergent behaviour of the SDP system is achieved in response to command requests originating from the Telescope Manager.
Minor cycle	See Major cycle. A sub-iteration of continuum image deconvolution that incrementally improves the fit of a sky model to observed visibilities in the image domain.
Metadata	A set of data that describes and gives information about other data, usually following a standard for astronomical data.
Middleware	Middleware is computer software that provides services to software applications permitting communication access via an Application Programming Interface (API)
Milli-SDP	A vastly scaled-down system to roughly 0.1% of the full hardware of the SDP system for SKA1 (in terms of FLOPS).

Mirror Science Archive	A repository which is maintained with identical data to the Science Archive.
Model Databases	The Model Databases component provides Science Data Model information, especially Telescope State, Telescope Configuration and Sky Model data.
Module*	An implementation unit of software that provides a coherent set of responsibilities.*
Mosaicking (Mosaicing)	A technique of extending the field of view by taking ‘snapshots’ of fields with adjacent pointing centres and combining data to create an image. In SDP this means multiple phase and pointing centres (which coincide) but joint deconvolution of bright sources from the entire mosaicked field.
Near real time computing	Processing with a deadline. Although in our application there is no hard deadline as in the classic definition of real-time processing, the first stage of the SDP needs to keep up with the CSP data stream. To distinguish from classic real-time processing, we call this near real-time processing.
Non-precious data	Data which, if lost, does not need to be retrieved.
Nvidia	A company that produces GPUs and mobile CPUs, including the Tegra and Tesla families.
Observatory Support Tools	This is a collection of capabilities (software tools, applications, hardware) used by observatory staff principally for quality assessment of science data.
OpenStack	OpenStack is a free and open-source software platform for cloud computing.
Operational System	A high-level conceptual entity providing the facilities for operating the SDP.
OS Containers	See Linux Containers.
Peak Performance	Maximum theoretically available compute power for a particular system.
Platform	The Platform is a collection of hardware and software responsible for starting and maintaining the SDP Operational System components.
Pre-construction Phase	The phase of SKA design activities running from late 2013 into 2017.

Processing Block	A Processing Block is an atomic unit of processing from the viewpoint of scheduling. A Processing Block is a complete description of all the parameters necessary to run a workflow in SDP. Processing Blocks can be for Batch or Real-Time processing, and can be of an extensible number of types depending on the type of observation data (e.g. Imaging transient detection).
Processing Block Controller	The Processing Block Controller is responsible for executing Science Data Workflows implementing Real-Time and Batch Processing.
Processing Controller	Scheduling and processing blocks configured by TM are handled by the Processing Controller. The Processing Controller schedules the execution of batch Processing Blocks according to resource availability. Processing Blocks are instantiated by the Processing Block Controller.
Quality of Service	Quality of service (QoS) is the overall performance of a computer network, particularly the performance seen by the users of the network.
Resource	A physical or virtual component of limited availability within the system, i.e. time of execution, resident memory, CPU cycles, number of hosts, bandwidth usage, power consumption, and so on.
RESTful web services	Web services that adhere to the architecture of REST (see Acronyms and Abbreviations).
Scheduler	The program that arranges the processing of jobs in the appropriate sequence.
Scheduling Block	A Scheduling Block is created by TM and is an atomic unit of observing from the viewpoint of scheduling. A Scheduling Block consists of a series of instructions to the control system of a given telescope (namely, TM) that are required in order to carry out a series of tasks that, when performed together, result in the taking of a Dataset. A Scheduling Block results in the creation of one or more Processing Blocks in the SDP.
Science Data Model	A major collection of data models used in the processing of astronomical data and in the creation of Science Data Products. It contains the Local Sky Model, Telescope State Information, Calibration Solutions, SDP QA metrics, Processing Block, Processing Logs, and other required ObsCore elements.

Science Data Processor	The collection of software, hardware, and processes which takes data from the Central Signal Processor and Telescope Manager, processes it, and delivers it ultimately to the SKA Regional Centres or directly to the SKA users.
Science Data Product	See SDP Data Product. Science Data Product is the more generic term used for data products once preserved and delivered by SDP.
Science Data Product Catalogue	The query-able metadata descriptions of indexed Science Data Products. It includes associated scientific metadata that can be queried and searched and includes all information so that the result of a query can lead to the delivery of data.
Science Pipeline Workflows	See Workflows.
Scrum	A part of Agile project management methodology, it is an iterative and incremental software development framework for managing product development.
SDP Data Product	A collection of data objects ready for long term storage and subsequent use. Typically a data product will include metadata and have successfully completed QA. Data products which the SDP will deliver include: Transient Source Catalogue, Science Product Catalogue, Image Products, Calibrated Visibilities, Sieved Pulsar and Transient Candidates, Pulsar Timing Solutions, and Dynamic Spectrum Data.
Self Calibration (Self cal)	The process of estimating the telescope errors. The “self” refers to the fact that we use the source itself (and the associated data) to solve for the telescope based errors.
Server	The server is the smallest decomposable unit of computing hardware in the SKA SDP. A server consists of a number of components, not all of which are required for all servers
SKA-Common	A logical component at SKAO level containing objects common to all telescopes (currently LOW and MID).
SKA Regional Centre	An approved off-site facility to which requested Science Data Products will be delivered..
Slurm	This is a job scheduler used by many supercomputers and computer clusters

Stateless	Stateless means that there is no record of previous interactions and each interaction request has to be handled based entirely on information that comes with it.
Station	A circular array of antenna elements that has a clear physical boundary defined by the station diameter, whose output signals are connected individually to the SKA1-low beam-former.
Steady-state maintenance	The maintenance period for which acceptance has been performed and any SLA prevails.
Subarray	A subarray (also referred to as sub-array) is a subdivision of an SKA telescope that can be scheduled and be operated independently of other subarrays. A subarray constitutes a set of resources (i.e. receptors, correlator slices...) and can be as large as the whole telescope array, or a single constituent item. A subarray is only prevented from being created by resource constraints.
Sub-arraying	Separate streams of data being channelled through separate pipelines simultaneously.
Sub-band	A subdivision of a frequency band.
Sustained performance	Actual achieved, useful computational performance for a particular application on a particular system. Depends on hardware, application and implementation (among others).
TANGO	The TANGO control system is a free open source device-oriented controls toolkit for controlling any kind of hardware or software. It is used to provide control and monitoring between SDP and TM during processing through a TANGO Control Interface (TANGO Façade).
Telescope State Information	A collection of real-time parameters and values that capture the status, operating state and behavioural characteristics of the telescope. It includes a dynamic computational model of the telescope (which was once called Telescope Model) used to answer all queries about the state of the Telescope. These are made available for subscription as TANGO attributes.
Test case	Set of test inputs, execution conditions and expected results developed for a particular objective such as to exercise a particular program path or to verify compliance with a specified requirement.

Tier n site	Relating to data storage. The Tier 0 site is at the location where the data has been generated (South Africa or Australia). A Tier 1 site is the first storage site receiving data directly from a Tier 0 site.
Tiered Data Delivery / Data Transport Service	The method, software and processes by which bulk data is transported to OST Users or to SKA Regional Centres. Also referred to as 'Bulk Data Transport'.
Time smearing	Degradation of an image due to the duration of an observation which is affected by the Earth's rotation.
uv buffer	See visibility buffer.
uv-coverage	Plot of the <i>uv</i> -plane as sampled by a measurement device.
uv data point	A measurement originating from a single pair of antennas in a single frequency channel that gives a single datum to be placed in the <i>uv</i> -plane.
uv-plane	A 2D grid of values that is equal to the 2D Fourier-transform of the angular distribution (brightness distribution) of observed sources in the sky.
View Packet*	The smallest bundle of view documentation you would show an individual stakeholder.*
Virtual Machine	This is an emulation of a computer system, based on the computer architecture and specifics of a real or hypothetical computer.
Virtual Observatory	A collection of interoperating data archives and software tools that comply to IVOA standards which govern its data models, access protocols, data formats and service registries.
Voxel	A voxel represents a value on a regular grid in three-dimensional space.
Visibilities	The raw <i>uv</i> data obtained from the correlator of an interferometry-based radio telescope, representing a set of measurements in the <i>uv</i> -plane.
w-projection	An algorithm that is able to synthesise data from non-coplanar telescope baselines (such as may result from the Earth's curvature or rotation).
w-snapshots	An algorithm based on a combination of w projection and snapshot imaging, for controlling the size of the "W" convolution kernel, which overcomes some of the deficiencies of wide-field radio interferometric telescopes.

Workflows	(Also Science Pipeline Workflows, Science Data Workflows). Data-driven pipeline represented as a graph of workflow stages. A workflow stage defines a unit of work, which might get performed by a certain part of the SDP system (e.g. a SDP service or an Execution Engine). Workflow stages can have dependencies on each other and use resources assigned to the Processing Block to perform work.
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* Descriptions marked by an asterisk are taken from *Clements et al (2011), Documenting Software Architectures Views and Beyond, 2nd ed.*