United Kingdom Infra Red Telescope

Joint Astronomy Centre

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ORAC: Glossary and Reference List

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This document contains the ORAC project glossary and reference list.

1.0 Introduction

This document attempts to provide a glossary of all of the acronyms, abbreviations and terms used in the ORAC project documents. It also provides a list of all of the other documents referenced in these documents, and of other relevant documents. The purpose of this is to save repeating these list in each document produced.

New references and definitions will be added to this document as required. It is recognised that as new references are added they cannot be kept in alphabetic order as the reordering would require cross-references from other documents to be updated. However, some attempt at organisation is made by separating the documents into categories, giving each a separate number list.

As the project has developed some of the terms used to describe items and functions have changed. For example the adoption of the Gemini OT as the observation preparation system in ORAC has led to the adoption of a number of terms deriving from it. We have tried to idetify such dual terms in the glossary, but it may be incomplete.

2.0 Glossary

ADAM	Astronomical Data Acquisition Monitor, the distributed tasking system in use at UKIRT and at other UK connected telescopes, and by Starlink. This comes in a VMS flavour and a Unix flavour (also in Perkin-Elmer and Transputer flavours of less relevance).
ALICE	Array Limited Infrared Control Environment
CAD	Command Action Directive
CAR	Command Action Response

Chained	Observations are "chained" in the OT to indicate that they must be carried out sequentially, but not necessarily consecutively
Chooser	The ORAC software that allows the user to choose which Observation to carry out next, and which provides the user interface to the Sequencer.
CHOP	A *mode* in which *exposures* are secured at two adjacent positions on the sky by *chopping* and in which the array is *read* only at the end of each exposure.
chopping	The process of switching the telescope pointing between two adjacent points on the sky by movement of the chopping secondary mirror, the "chopper".
CICS	The Gemini Core Instrument Control System
Classical	The form of observing which is current practice at UKIRT, whereby an observer is awarded a block of time in which to observe.
Config	The ascii file that contains a description of the required instrument configuration (filters, exposure times etc.), and which is used by the ICS
DHS	Data Handling System - or the system that is responsible for storage and rapid display of data acquired, and for other such "data handling". Depending on context this might be the Gemini DHS or the UKIRT DHS.
DRAMA	The AAO tasking system that has carried on where ADAM left off.
Edict	EDinburgh Infrared ConTrol. The next generation of ALICE.
EPICS	Experimental Physics and Industrial Control System
EXEC	EXECutable procedure - the description of the required sequence of instrument configurations, telecope moves, exposures, which is used by the Sequencer (ORAC) or ICS (current).
exposure	The interval between *resets* of the array. Depending on the current *mode*, the buildup of charge on the array may be *read* once or several times during this period.
Flexible Scheduling	Observatory operations in which an attempt is made to schedule individual observations for numerous users on any given night, according to required conditions, in order to maximise the science output of the telescope.
Frame	A data frame, or the acquisition thereof. Perhaps used inconsistently, and roughly equivalent to an integration in the current UKIRT system.
Grouped	Observations are grouped in the OT to indicate that they must be Scheduled as a single un-interruptible block, with any relative order.
ICD	Interface Control Document
ICS	Instrument Control System
Instrument Configuration	The same as Config.
integration	A sequence of one or more *exposures*. Data within an integration is combined in the detector software system and returned as a single dataset to the host. The exposures may be made in a single beam or in two beams, depending on the *mode*. The result of a single OBSERVE command.

mode	One of *STARE*, *ND_STARE*, *CHOP*, *ND_CHOP*, and similar UFTI terms.
ND_CHOP	A *mode* in which *exposures* are secured at two adjacent positions on the sky by *chopping*, and in which the array is *read* several times during each exposure.
ND_STARE	A *mode* in which *exposures* are performed at a single target position on the sky (*i.e.* not *chopping*) and in which the array is *read* several times during each exposure.
Observation Sequence	The sequence of telescope movements and integrations used to obtain an observation of a source.
observation	A sequence of one or more *integrations* secured on the same target object. In this definition is roughly equivalent to a *group*. (Not quite the same as Observation in OT terminology, but closely related subset - see next item)
Observation Definition	Also called Observation in some documents, and in particular by the OT. The electronic description of the instrument configuration, target details, sequence, required conditions for the observation of a single astronomical target. It is the smallest schedulable unit.
Observation Database	The database of Science Programmes and Observations which have been created using the OT and submitted to UKIRT.
Observation Scheduler	Those aspects of the Scheduler which are concerned with calculating an Observing plan for a night.
Observation Preparation System	The tool used by the users for phase-2 input. For the ORAC system this is the same as the OT. For the current system it refers to UKIRT_PREP
Observing Mode	The mode into which an instrument (or ICS) is put for an Observation. Thus for an OBSERVE command an ICS will be in a single Observing Mode and everything required to acquire the data at that stage must be handled by the ICS.
Observing Tool	Originally the Gemini Observing Tool, there is now also a version for UKIRT in development. The Phase 2 preparation system.
Observing Plan	Ordered list of targets to be observed on a given night, prepared by the Scheduler
ORAC-DR	The ORAC pipeline data reduction system
OCS	Observatory Control System. The system that has overall control of observing at the Observatory, in charge of the other systems. Depending on context this may be the Gemini OCS or the UKIRT OCS.
OT	Short for the Observing Tool (Gemini or UKIRT version).
PATT	Panel for the allocation of telescope time
Phase -1	Proposal submission by the observer, proposal information
Phase -2	The detailed definition of required Observations for accepted proposals.
Plan	short from of Observing Plan or Semester Plan
Program(me)	short form of Science Program(me)
Queue	The Observing Plan - the ordered list of Observations to be executed sequentially.

Queue Scheduled	Flexibly scheduled observing implementation in which the Observations to be carried out are sorted into a queue based on their requirements and priority.
Recipe	description of the steps for reducing data in ORAC-DR
Science Programme, Science Program	All the observations required for all the sources a PI has been awarded time for. In general ‘programme’ is used to refer to the human concept and ‘program’ to the electronic version - ie the output of the OT for several targets. (but this may not be consistent in older documents).
Semester Plan	Plan for a semester of flexible and classical observing, as prepared by the Scheduler
Service	The current UKIRT service programme.
Scheduler	Software to create nightly Observing Plans, and analyse Semester Plan
Script	Sometimes a general term, sometimes referring to an ORAC-DR script.
SGML	Standard Generalised Markup Language
SIR	Status and Information Record
STARE	A mode in which exposures are performed at a single target position on the sky (*i.e.* not *chopping*) and in which the array is *read* only at the end of each exposure.
Strategic Scheduler	Those functions of the Scheduler which are concerned with keeping track of/ analysing the distribution of allocations for a semester.
Target Description	Information describing the target: co-ordinates, guide star location
TAG	(UKIRT) Time Allocation Group
TCS	Telescope Control System
userid	The users chosen name which is used as the name of the sub-directory in which their Configs and EXECs are stored. (usually the users initials)
VxWorks	A real time operating system from Wind River.
XML	eXtensible Markup Language

3.0 References

3.1 ORAC References

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