#### **GECO FUNCTIONALITY**

GECO provides the following capabilities:

#### 1. Configuration data repository

As described in the Overview, all the configuration data generated in a project can be stored in GECO.

The data can be read, added or modified, depending on the rights assigned to the user who has logged in into the tool.

Data can be displayed by the user as:

- A summary data view which displays the most relevant field records in a table
- A full data view that displays all field records in a form. Specifically, the relationships among requirements, documents, individuals, etc. are shown in the full view

In both views, GECO provides the user with all the filtering and sorting capabilities that are needed to search the desired data.

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	Code	Title			Reference	Confi.	Date	Sub-subject		
	EF/001 8 0FA002 P	pectrograph Optical Conceptual Design	1 A Crea 1 B Crea			\$915-0	15-03-2008	Optics Optics		
		tate scale verification test in the Spectro bectrograph Mass verification	1 B Crea 1 A Crea				21-03-2008	Optics		
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		otator Adapter Functional specification	1 A Crea				21-03-2005	Structures		
		terface requirements Support Structure	1 A Crea				21-03-2008	System		
RON	F-SP(001 S	peckograph Functional Requirements	2 B Crea			100	21-03-2008	Ophics		
Roto	CX001 P	R Camera Requirements Document	1 A Crea	dad	CD	1910-0	29-08-2007	System		
SPIE	F-SP-SH/001 S	huter Specification	1 A Crea	ded		true	13-06-2007	Shutter		
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### 2. Data traceability

Cross-relationships among the configuration data (mainly parent-child requirement traceability) can be introduced. The data traceability is critical for keeping the coherence of the system.

**GECO** searches parent or child requirements by taking into account the relationships entered into the Requirements form.

Code	FRIC-CR/001	Title*	Operating Tempera	ture		
Document*	R010001	• Source	instrumentation Oro	ND		
Ref. Line	CD valid'	Section*	General Requireme	nts		
Req. type*	Environmental Requirements	-				
Requirement	Text	Parent Requir	ments	Requirement ima	iges	
The operating be 77K	g temperature of the cryostal shall	# Pa 1 FRIC/001	ent Requirement	30	Images	
	irement's Parents					
FRICIDO		equivement title		nt requirement text erature shall be 77K.	Document PORC/001	Child requirement FRIC-CRI001

# 3. Configuration management and quality control

GECO helps managing configuration changes, non-conformities and anomalies during their lifecycle, as well as keeping the related users informed by sending e-mails at their status transitions.

	CC/EF/001		Sub-subject*	System		Classification*	Subsyste
Initiator*	Hernandez Rodriguez, Isabel	v	Starting Date*	26-03-2006		Priority*	Medium
Assigned to		-	Modification Date	26-03-2006		Current Status*	Started
Description'					Affecte	d	
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#	Configuration Element	#	Interface	18	7	Docum	ents
1 EF		33				SP/EF/001	
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Prior to start the system verification, the technical requirements can be automatically introduced into the verification matrix.

# 4. Automatic generation of requirement documents

The requirement section of the documents can be generated automatically from the requirements stored in GECO.

This function helps to keep a coherent set of requirements and avoids maintaining duplicated information.

GECO allows to organize the requirements into sections and subsections, which can be arranged before exporting them to the requirement document.

Requirement Documents play and important role in the requirement set and are mainly needed to interface with external parties, such as contractors and customers, as well as to comply with the intended project milestones and reviews.

### **GECO OVERVIEW**

**GECO** our Configuration Management Tool, provides the System Engineering Group with the means to manage the configuration data generated in all phases of a project, from development to integration, verification and operation, as well as disseminating this information to all project members in charge of developing and operating the system.

The configuration data that can be stored and managed by **GECO** are:

- Product Tree elements
- Parts
- Table of interfaces
- Requirements, interface requirements and the relationships between parent and child requirements
- Requirement verification matrix
- Configuration changes
- Non-conformities
- Verification and operation anomalies
- Project documentation

The configuration information is laid out hierarchically, following the system's Product Tree. This way of displaying the subsystems provides an intuitive view of the system's breakdown structure, and thus allows the user to access, with a few mouse clicks, to a Product Tree element, its requirements, interfaces, associated documents, etc.

GECO contains a relational database and a graphical user interface developed in Java.

#### Why is GECO needed in a project?

Software tools help managing the big amount of information generated during the lifetime of any project. This is particularly important for geographically distributed organizations, where it becomes essential to keep the configuration elements information in an electronic format, well organized and easily accessible to all people involved.

#### FRACTAL System & Project Suite includes:

#### 1.System engineering and configuration control

The configuration data management tool, GECO, helps to track the system development successfully, from the initial high-level requirements up to integration, verification and operation.

#### 2. Project documentation control

The documentation management tool, **DOCMA**, helps to organize and keep track of your project documents, improving the internal communication among the different members involved.

#### 3. Project management tool

The project management tool, **MANATEE**, helps your organization manage your projects efficiently, by controlling the three project parameters (scope, schedule and budget).

All applications can be used independently or in an integrated way.

A trial license and further information about these tools can be found at:

http://www.fractalslne.es/ e-mail:info@fractal-es.com



## Configuration Management Tool