

SUMO FUNCTIONALITY

1. Tasks repository

The definition of the operation and maintenance tasks should include:

- ▲ the task detailed description (also, the link to a separately defined procedure, where the task is defined in detail can be provided),
- ▲ the tasks periodicity (if applicable),
- ▲ the links among tasks (if any),
- ▲ the task estimated duration,
- ▲ the task estimated priority and
- ▲ the resources that are needed.

Task Form

PT Code: TEL-IN-SP-CR Code: TA/TEL-IN-SP-CR/0001

Task name: Crystal LN2 filling Priority: High

Description: This section describes the general procedure for filling the supergraph crystal from a liquid nitrogen storage dewar (i.e. SP65, SP100 and/or P1120), in order to maintain the operation temperature of the system. To perform this activity the following steps must be followed carefully by skilled personnel:
1. Remove MP&R processor, observe and maintain clean

Period (in days): 2 Condition: Regular Time slot

Type: Preventive Time slot: Regular Time slot

Duration (in hours): 1.5

Comments:

Linked tasks:

Task	Time between tasks (in hours)
No items to show.	

Manpower:

SKL	Men	Total man/hours
Mechanical technician 1	1	1.5

Equipments:

Equipment	Amount	Document	File
Scissors platform EQP10	1	Crystal LN2 filling proced...	doc/PRO_TEL-IN-SP-CR_...

Spare:

Spare	Amount	Supply	Amount
Liquid nitrogen (LN2) SLUP...	1		

External services:

External service	Workshop
No items to show.	

2. Resources and configuration control

SUMO allows storing and managing the information related to the operation and maintenance resources, such as goods inventory, operation and maintenance related documents, spares, supplies, equipment, workshops, personal profiles and external services.

In addition, the purchase orders generated when acquiring new assets can be registered.

Purchase Order Form

Purchase order information: PT element code: TEL-IN-SP-CR Code: ORD/TEL-IN-SP-CR/00001

Title: Liquid nitrogen (LN2) supply January 2014 Description: LN2 supply

Responsible: Jane Smith Company purchase order code: Purchase order file: Upload purchase order file: No file selected.

Status: Received

Provider / Company information

Provider name: Linds VAT Code: Address: Bales, 105 - 08029 BARCELONA Contact person name: Contact person e-mail: linds@linds.com

Quotation information

Quotation reference: Upload quotation file: No file selected.

Spare Form

Spare code: SPA00001 Spare name: Elevation drive

Amount: 3 Minimal amount: 1

Location: Comments:

Critical Repairable

Purchase orders

Purchase order	Date	Amount
Elevation drive purchase March 2013 1	2013/09/27	1
Elevation drive purchase April 2014 3	2013/09/18	2

Consumed spares

Task	Date	Amount
No items to show.		

Associated PT elements

PT element	Document	File
TEL Telescope 1 1		
TEL-OPT Telescope Optics 3		
TEL-OPT-M Primary Mirror 4		

Associated documents

Document	File
No items to show.	

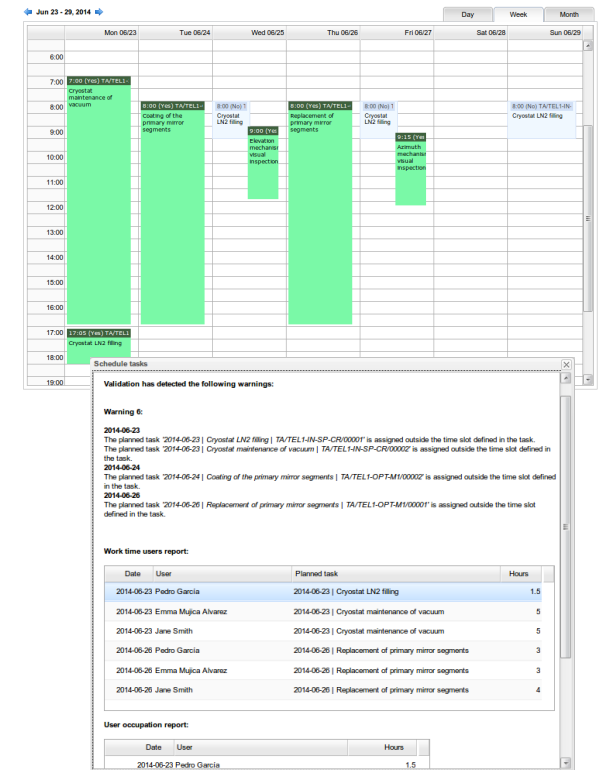
3. Problems tracking

Anomalies can be registered and corrective actions scheduled and tracked.

4. Tasks scheduler

SUMO allows generating an operation and maintenance schedule for a given period of time taken into account all tasks that can be automatically programmed. The schedule generation includes several utilities as described below:

- ▲ The scheduler includes automatically the periodical tasks and linked tasks.
- ▲ The schedule can be edited manually. The task execution date, automatically suggested, can be changed by hand.
- ▲ The tool provides the means to analyze that the generated schedule can be performed with the available resources. Warnings are displayed to identify potential resource conflicts.



SUMO OVERVIEW

SUMO facilitates managing the operation and maintenance tasks and all type of resources required for the exploitation of a complex facility during the Operation phase. The tool provides:

- ▲ an operation and maintenance information repository,
- ▲ assets and stock control,
- ▲ tasks scheduler,
- ▲ executed tasks archive,
- ▲ configuration and anomalies control,
- ▲ notification and users' management.

SUMO shall automatically schedule periodical tasks and facilitate the search and the programming of non-periodical tasks. Tasks planning can be visualized in different formats and be edited dynamically. This allows the adjustment to the available resources and to consider anomalies, already allocated dates and other constrains occurred during daily operation.

SUMO shall provide warnings to the users notifying potential conflicts such as "the required personal is not available" or "the stock has run out of the spares needed for carrying out the scheduled tasks".

SUMO uses a public relational database and provides a graphical user interface based on WEB forms. The main advantage is that there is no need to install any specific software on the client computers; the web browser is enough.

Why SUMO is needed in a project?

Software tools help to manage the big amount of information that is generated during the lifetime of any project, which is particularly important for geographically distributed organizations.

The **FRACTAL System & Project Suite** includes:

1. System Engineering and Configuration Control

The configuration data management tool, **GECO**, helps to correctly track the system development in order to ensure that the final system meets the initial high level requirements and can be integrated.

2. Documentation Management Tool

The documentation management tool, **DOCMA**, helps to keep and organize documents and to improve the internal communication among the different members involved in a project.

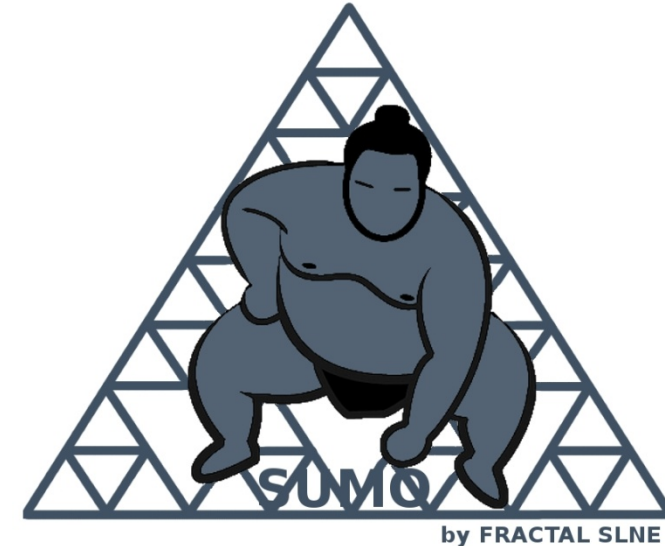
3. Project Management Tool

The project management tool, **MANATEE**, helps to manage the projects in any organization controlling the three projects parameters (scope, schedule and budget).

4. Operation and Maintenance Management Tool

The operation and maintenance management tool, **SUMO**, helps to manage the the operation and maintenance tasks of a complex facility.

More information about these tools can be found at: <http://www.fractal-es.com>



Operation and Maintenance Management Tool

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