# SPIRE ICC

User Requirements Documents
Consortium

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Comments From

Issue 1

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# 1 Introduction

## 1.1 Purpose & Scope

Requirements placed on the ICC by the SPIRE Consortium as a special user. A mechanism must exist that allows a strong interaction between the SPIRE Consortium and the ICC.

## 1.2 Definitions of Terms and Acronyms

## 1.3 Related Documents

RD-1 SPIRE ICC URD Scope Document
RD-2 FIRST-FSC URD

RD-3 SPIRE ICC AIV URD

### 1.4 Overview

This document first describes the **users** relating to the SPIRE ICCs interaction with the general public and then the **requirements** they make on the ICC.

## 2 User Characteristics

### 2.1 The SPIRE Consortium Experts

The SPIRE consortium has a wealth of expertise relating to the instrument and its use. The ICC will want to draw on that expertise frequently and efficiently. In this context the Consortium **Experts** are *users* in the sense of being **information providers**. The actual individuals concerned may of course be members of the ICC as well as having other roles. It may be sensible to divide the consortium experts into sub-divisions of expertise, since the interactions may be different for different types of experts.

#### *2.1.1 Instrument specialist expert*

Able to provide detailed knowledge of an instrument sub-system

#### *2.1.2 Instrument system expert*

Able to provide knowledge of sub-systems interactions

#### *2.1.3 Science expert*

Able to provide advice on expected science returns.

#### *2.1.4 Data-reduction expert*

Able to provide experience and good-practice for data reduction from other missions or other wavelengths.

### 2.2 The SPIRE Consortium users

SPIRE consortium members will make demands on the ICC that are special in some ways.

#### *2.2.1 Consortium Astronomer*

It is expected that SPIRE Consortium Astronomers wishing to use the instrument will mainly interact with the ICC via the FSC as any other Astronomer would do. However, it is inevitable and perhaps desirable that **Consortium Astronomers** will expect privileged access to the ICC, for example access to new data reduction algorithms. In these cases we would expect a **Consortium Astronomer** to be an expert in using the instrument and prepared to invest more time and effort into understanding their data and working with the software to achieve the best results.

#### *2.2.2 Instrument Engineers*

Will require special access to data and interactions with the instrument via the ICC in particular during the ILT (see AIV user requirements document RD-3)

### 2.3 Information Input

#### *2.3.1 Solicited Information Retrieval*

The ICC will need to be able to extract specific information from the relevant expert(s) swiftly and painlessly. This information might be specifications of instrument sub-systems; models of sub-system behaviour; example scientific data; simulated data; expected results; etc. etc. The information could be in any format, document; image; phone-call; software; etc. etc..

1. **Source** here
2. **Importance** essential
3. **Frequency** daily
4. **Phase** Now

### *2.3.2 Unsolicited Information Collection*

The ICC should be open to suggestions and advice from Consortium Experts.

1. **Source** here
2. **Importance** desirable
3. **Frequency** daily
4. **Phase** Now

### *2.3.3 Information Storage and Retrieval*

The ICC should be able to store and retrieve the information it extracts from the Consortium Experts. This "knowledge database" should be easily searchable probably using keywords as entered by the person who requested the data. "Off the shelf" products are likely to be available and required for other purposes.

1. **Source** here
2. **Importance** desirable
3. **Frequency** daily
4. **Phase** Now

## 2.4 Information Output & Feedback

### *2.4.1 Beta Testing*

The ICC should enable Consortium Astronomers to use the latest, experimental data-reduction techniques and have a responsive feedback mechanism to utilise their experiences. Software that is available in Beta test should feel as similar as possible to alpha released software.

1. **Source** here
2. **Importance** desirable
3. **Frequency** monthly
4. **Phase** Pre Launch