



1. INTRODUCTION

1.1 Scope

The need has been identified for a system allowing the SPIRE ICC to manage and document the analysis and handling of questions from users of the ICC (including the SPIRE Consortium and the Herschel Science Centre). This system, called the Helpdesk, consists of a set of software and procedures that will enable all questions to be tracked from initial input to a proposed solution.

This document describes the user requirements for the SPIRE ICC helpdesk software. Procedures will be included in the SPIRE Facility Operations Manual.

1.2 Background

The SPIRE ICC Helpdesk is intended to perform three major roles during the mission:

- Support queries from the HSC to the SPIRE ICC associated with anomalous behaviour of the instrument or
- standard pipeline processing software
- Support questions from within the SPIRE Consortium on all aspects of the instrument, its data and its processing software
- To supply information about the instrument, its data products and its processing software

To perform these roles effectively the helpdesk must be able to track queries and responses, assign questions to individuals within the ICC and consortium, and establish a knowledgebase so that duplicate queries can be dealt with efficiently.

There shall be three types of user of the system:

- User:
 - will pose questions or seek information from the Helpdesk – this includes the HSC helpdesk
 - must be able to track the status of their query
 - must be able to list and search for queries
- Administrator:
 - will assign queries to relevant instrument experts
 - will update the status of queries
 - will add/update information available to Users
 - an individual administrator might be restricted to these tasks in just a limited subarea of the SPIRE helpdesk
- Instrument Experts:
 - will respond to queries assigned to them by an Administrator or pass them on to other Experts
 - will update the status of queries
 - will input information useful to Users



1.3 Applicable Usecases

The following usecases from the SPIRE ICC Usecases document are the basis for these requirements.

- UC-CON-001 Consortium Expert Knowledge Capture
- UC-CON-003 Disseminate Knowledge
- UC-HSC-002 Support HSC Query
- UC-ICC-002 Handle Problem Report
- UC-ICC-010 Maintain ICC Webpage

2. REQUIREMENTS

2.1 Environmental Requirements

ICC-Helpdesk-Env-0010	The helpdesk software shall operate within the SPIRE Operations Centre at RAL. <i>Constraints on the Operating System, memory, disk space, processing power shall be compatible with the machines available</i>	
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2.2 Interface Requirements

ICC-Helpdesk-Int-0010	The system will be accessible by all members of the ICC whether located inside or outside RAL <i>All types of users will be able to access the system from outside RAL</i>	
ICC-Helpdesk-Int-0020	Access to the Helpdesk shall be possible using a web browser <i>Need to specify a list of browsers that should work?</i>	
ICC-Helpdesk-Int-0030	Users of the system will be restricted to members of the SPIRE Consortium and other authorised users (e.g. HSC staff). <i>Since the ICC Helpdesk is not a public facility users will have to log on to be able to access it</i>	
ICC-Helpdesk-Int-0040	The helpdesk system will be able to receive queries from the HSC <i>The interface should be such that a query sent by the HSC should be automatically imported into the Helpdesk. How queries are sent from the HSC remains TBD</i>	
ICC-Helpdesk-Int-0050	The helpdesk system will be able to receive queries from any User	
ICC-Helpdesk-Int-0060	The helpdesk system will be able to receive unsolicited information from within the SPIRE consortium <i>Approved articles will be stored in a knowledgebase. While unapproved information may circulate within the ICC the Helpdesk must be certain that the information it disseminates is accurate so an approvals process is required</i>	



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2.3 Functional Requirements

ICC-Helpdesk- Func-0010	All queries delivered to the helpdesk will be logged and tracked	
ICC-Helpdesk- Func-0020	All Users shall be able to look at the current status of a query	
ICC-Helpdesk- Func-0030	It shall be possible to list the queries in the helpdesk <i>It should be possible to filter by status criteria such as Open, Closed, Originator, query number, assignee etc and sort according to other criteria such as date, query number, importance, latest update date etc</i>	
ICC-Helpdesk- Func-0040	It shall be possible to display either a summary of the query or the complete information	
ICC-Helpdesk- Func-0050	Unsolicited information deliveries will be logged in a knowledgebase – see requirement ICC-Helpdesk-Int-0060	
ICC-Helpdesk- Func-0055	It will be possible for Users and Administrators to classify queries and unsolicited information to be in certain pre-defined categories <i>This will make it easier for Administrators to assign queries to experts by matching classifications to experts' areas of expertise.</i>	
ICC-Helpdesk- Func-0056	It will be possible for an individual Administrator to be restricted to administrating some limited range of categories <i>We don't want all administrators to be superusers</i>	
ICC-Helpdesk- Func-0060	Helpdesk administrators shall be able to assign queries to be dealt with by individuals with appropriate expertise. <i>The appropriate individual will be found from the expertise database</i>	
ICC-Helpdesk- Func-0070	Assignment of a query to an Instrument Expert shall give rise to a notification to the expert concerned (by email, TBC) <i>I.e. it should not be the responsibility of the expert to keep looking into the helpdesk to see if (s)he has anything to do!</i>	
ICC-Helpdesk- Func-0080	Instrument Experts will be able to directly enter their response to queries assigned to them using the helpdesk system. These responses will be logged.	
ICC-Helpdesk- Func-0090	Responses may include providing a solution to the problem, commenting on the problem or sending the problem to another individual (who will be notified as in Func-0070). Other responses may also be possible (TBD). These responses will be logged	
ICC-Helpdesk- Func-0100	The helpdesk will be able to send messages to ICC consortium members if the response to a query, or the arrival of unsolicited information, is deemed sufficiently important. Such messages will be logged <i>The assessment of whether people need to be informed of such information will be made when the item is approved for the knowledgebase</i>	
ICC-Helpdesk-	The helpdesk will send responses to the originators of a query	



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Func-0120	(including HSC). These responses will be logged <i>The system for informing originators should ideally be via automatic email but is TBD</i>	
ICC-Helpdesk- Func-0130	On receiving a query the helpdesk will be able to determine whether a similar query has already been answered <i>An automated process for this using keywords to be assigned by the query originator would be useful, but it is likely that the helpdesk operator will have to intervene by hand and assess the similarity of any given query to one that has already been answered. If a similar query has already been answered then the operator can send this previous answer to the query originator to see if this solves their problem.</i>	
ICC-Helpdesk- Func-0140	The helpdesk shall maintain a database of expertise of individuals within the ICC and broader consortium.	
	The expertise database shall be accessible only to experts and administrators <i>We don't want Users going directly to experts</i>	
ICC-Helpdesk- Func-0150	The administrators will be able to add, remove or modify the entries for individuals in this expertise database in their relevant areas. Experts will be able to modify their own individual expertise entry. <i>The helpdesk will notify an individual if their entry has been added, modified or removed</i>	

2.4 Performance Requirements

ICC-Helpdesk- Perf-010	The system will be able to cope with at least 20 users at any one time.	
ICC-Helpdesk- Perf-020	The system will be able to store at least a million queries	
ICC-Helpdesk- Perf-030	A query status or a list of queries must be returned in less than 30 seconds	