

# FAIR Project

## Form and Status of Specifications

### Content

#### **Form and Status of the FAIR Project In Kind Contribution Contract and the Functional Specifications**

- Overview of the contractual and functional specifications framework
- Structure of the Contract
- Structure of the functional specifications
- Status of the "In-Kind Contract" and the Functional Specifications

# FAIR Project

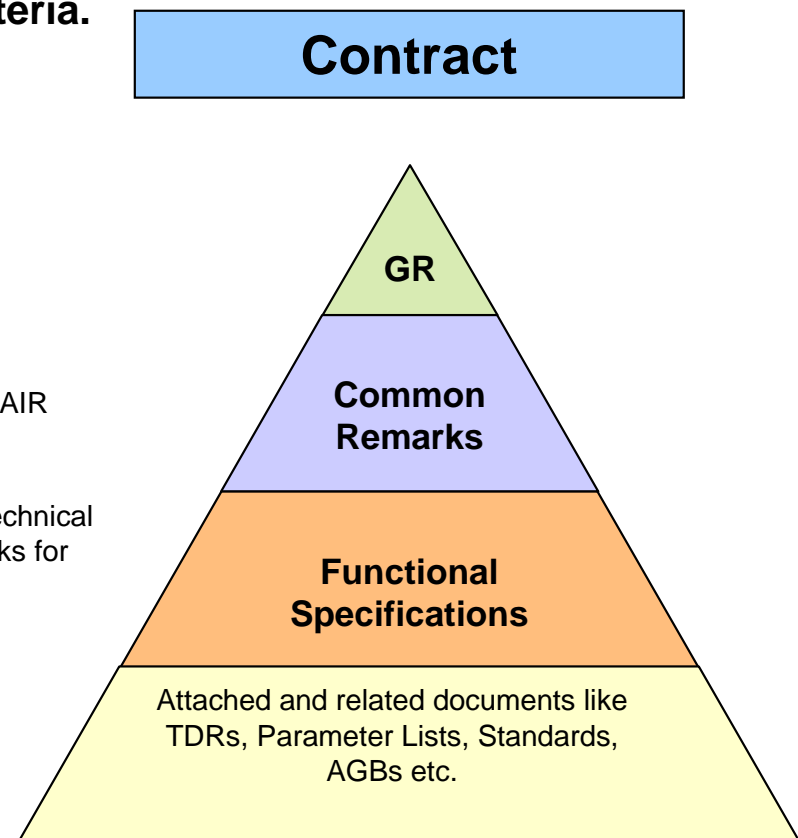
## Form and Status of Specifications

### Overview

A set of specifications describes the contractual framework, the functional requirements, the shipping and assembly definitions and the acceptance criteria.

The set of specifications is based on the FAIR Convention and the various ANNEX, especially ANNEX-5

- **Contract**  
Contractual and legal conditions for each In-Kind Contribution
- **General Remarks (GR)**  
Technical Specifications and requirements which are valid for all FAIR accelerators.
- **Common Remarks (CR)**  
Technical Specifications and requirements which are valid for a Technical System (like Common Remarks for RF Systems, Common Remarks for Magnets, Normal Conducting)
- **Functional Specifications (EF)**  
Detailed and individual specifications and requirements for each Accelerator
- **Attachements**  
Common or individual attached documents



# FAIR Project

## Form and Status of Specifications

### Contract Structure

Introduction

Scope of the Deliverables

Provisions

European, German Laws

Schedule, Milestones, Terms of delivery

Compensation, Warranty

Technical acceptance and final acceptance

Cooperation and information

Inventions, patent rights, publications

Documentation

Assignment of claims, right of set-off and right of retention

Alterations and additions to the contract, partial invalidity

Place of fulfilment, place of jurisdiction, applicable law

DRAFT

Gesellschaft für Schwerionenforschung mbH Darmstadt		<b>GSI</b>
<b>FAIR</b>	Document Title <b>FAIR Contract In-Kind Contribution</b>	
EDMS Document No <b>FAIR-XXXX-CT-004</b>	Date yyyy-mm-dd 2008-08-07	
EDMS Project Document - tba -		
<b>Abstract</b> The document informs an In-Kind Contributor about the general contractual conditions or the delivery of a FAIR Accelerator Facility component or system.		

# FAIR Project

## Form and Status of Specifications

### Structure of General Remarks, Common Remarks and Detailed Functional Specification

[Introduction, Definitions](#)

[Scope of work and deliverables](#)

[Provisions of the Contract and Contract Body](#)

[Contact Persons](#)

[Engineering Standards and Design Principles](#)

[Common Contractual and Legal Standards](#)

[Quality Assurance](#)

[Environmental Conditions, Interactions, Interfaces](#)

[Specifications and Performance of Equipment](#)

[Tests and Acceptance](#)

[Shipping, assembly, and Consignment](#)

[Reporting and Change Management](#)

[Warranty](#)

The chapter "Specifications and Performance of Equipment" contains the detailed technical functional specifications.

DRAFT

Gesellschaft für Schwerionenforschung mbH Darmstadt <b>GSI</b>	
<b>FAIR</b>	<b>FAIR General Remarks</b>
EDMS Document No <b>FAIR-GMXX-CT-001</b>	Date yyyy-mm-dd 2008-08-07
EDMS Project Document – tba-	
<b>Abstract</b> The document describes the common, general functional specifications for all accelerator systems as well as the common Quality Assurance policy and general and the general Test Strategy and common tests.	

# FAIR Project

## Form and Status of Specifications

### Status of Specifications

The In-Kind Contribution Contract, the General- and the Common Remarks for the various Technical Systems and the detailed Functional Specification for the SIS100 are in-work.

#### Next Steps

- Finalizing the contract and the General- and Common-Remarks.
- Finalizing the individual tech. specifications
- Negotiating and signing the contract

List of FAIR Specifications										Version 2.1 / 11. July 2008	
EDMS Name: FAIR-XXXX-EF-000											
EDMS Doku-Number										Titel	
Machine Code	Equipment Code		Separator	Doc Type	Separator	Number					
X	X	X	X	-	C	T	0	0	1	Call for Tender	
X	X	X	X	-	C	T	0	0	3	Contract	
X	X	G	R	-	E	F	-	0	0	0	General Remarks
X	X	M	G	N	-	E	F	-	0	0	Common Remarks on normal conductive Magnets (2.N.2-N)
X	X	M	G	F	-	E	F	-	0	0	Common Remarks on superferric Magnets (2.N.2-F)
X	X	M	G	S	-	E	F	-	0	0	Common Remarks on super conductive Magnets (2.N.2-S)
X	X	P	C	-	E	F	-	0	0	0	Common Remarks on PCs (2.N.3)
X	X	R	F	-	E	F	-	0	0	0	Common Remarks on RF-Systems/Components (2.N.4)
X	X	B	D	-	E	F	-	0	0	0	Common Remarks on Beam Diagnostics (2.N.6)
X	X	V	C	H	-	E	F	-	0	0	Common Remarks on Vacuum/High (2.N.7-H)
X	X	V	C	U	-	E	F	-	0	0	Common Remarks on Vacuum/UHV (2.N.7-U)
X	X	E	L	-	E	F	-	0	0	0	Common Remarks on Electron Cooling (2.N.9)
X	X	S	C	-	E	F	-	0	0	0	Common Remarks on Stochastic Cooling (2.N.10)
X	X	C	L	-	E	F	-	0	0	0	Common Remarks on Local Cryogenics (2.N.12)
										0	Common Remarks on Controls
										0	Specifications for HEBT (2.3)
										0	Specification for Super FRS (2.4)
										0	Specification for CR (2.5)
										0	Specification for NESR (2.6)
										0	Specification for p-Linac (2.7)
										0	Specification for SIS300 (2.8)
										0	Specification for p-bar Target (2.9)
tem 1 Driver Amplifier										0	Specification for RESR (2.10)
tem 1 Digital Phase Control Interface										0	Specification for HESR (2.11)
tem 1 Common RF-System										0	Specification for SIS300 (2.12)
tem 2 Driver Amplifier										0	Specification for ER (2.13)
tem 2 Digital Phase Control Interface										0	Specifications for Cryogenic Units (2.14.8)
tem 2 Common RF-System										0	Specifications for Controls (2.14.10)
Digital Phase Control Interface										0	Specification for Radiation/Safety (2.14.15)

Specifications for SIS100		
Nr.	PSP-Nr.	Preliminary Title
1	2.8.2.1	Specification for SIS100 Main Dipoles
2	2.8.2.2	Specification for SIS100 Main Quadrupoles
3	2.8.3.*.2	Specification for Embedded Control Unit
4	2.8.3.*.3	Specification for high precision Current Measurement
5	2.8.4.1.2	Specification for SIS100 Accelerator System 1 Driver Amplifier
6	2.8.4.1.4	Specification for SIS100 Accelerator System 1 Digital Phase Control Interface
7	2.8.4.1.5	Specification for SIS100 Accelerator System 1 Common RF-System
8	2.8.4.3.2	Specification for SIS100 Accelerator System 2 Driver Amplifier
9	2.8.4.3.4	Specification for SIS100 Accelerator System 2 Digital Phase Control Interface
10	2.8.4.3.5	Specification for SIS100 Accelerator System 2 Common RF-System
11	2.8.4.4.3	Specification for SIS100 Barrier Bucket Digital Phase Control Interface
12	2.8.4.4.4	Specification for SIS100 Barrier Bucket Digital Gap Voltage Monitor, Gap Relays
13	2.8.5	Specification for SIS100 Injection/Extraction System
14	2.8.6	Specification for the SIS100 Beam Diagnostics System
15	2.8.6.*.6	Specification for the SIS100 Beam Diagnostics Data Acquisition Subsystem
16	2.8.6.2	Specification for the SIS100 Beam Position Monitors
17	2.8.6.3.4	Specification for the SIS100 Fast Current Transformers
18	2.8.7	Specification for the SIS100 Vacuum System (80%)
19	2.8.7	Specification for the SIS100 Vacuum System (20%)
20	2.8.7.1.1	Specification for the SIS100 Pumping Stations
21	2.8.11	Specifications for the SIS100 Beam Dumps
22	2.8.12	Specification of the SIS Local Cryogenic System

