D1.1 Management Procedure document

CRISTAL-ISE Project

Version 1.0

January, 2013

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Introduction

The CRISTAL-ISE project aims to develop advanced knowledge of the CRISTAL Kernel in the ALPHA3I and M1i research teams and to develop new technical skills at UWE. This will address the next generation of M1i and ALPHA3I customer requirements by facilitating the semantic enhancement of the kernel and the interoperation of multiple instances of the Agilium product, and will be demonstrated by deployment at ALPHA3I and will enable researchers' development at UWE and M1i.

Overall and Specific Project Objectives

The following specific objectives will be met:

- To develop research and development expertise of the CRISTAL kernel in the M1i company in the context of the ALPHA3I market and to enable the transfer of new and future academic research into the M1i and ALPHA3I commercial domains;

- To enable researchers from UWE, particularly younger researchers, to benefit from the opportunity of working in a European development environment and to experience the practical application of their research ideas in a commercial setting;

- To provide, in particular, an enhanced version of the CRISTAL kernel with improved modelling potential that can capture customers' usage patterns so that multiple instances of those kernels can discover information about each other and facilitate their inter-operation across commercial domains;

- To develop new research directions for future product development of the CRISTAL /Agilium software including applications for interoperation between user sites, the capture of provenance and simulation data and the inclusion of domain semantics and to demonstrate this in the context of the ALPHA3I product environment;

- To enable the effective <u>exchange</u> of knowledge and technology between participants and to provide mutual benefit for the collaboration;

- To expose cross-cultural and cross-sectoral work habits, methodologies and work processes to all project participants and

- To provide the basis of future, sustainable European collaboration between the participants in the area of CRISTAL /Agilium research and development.

Proposed management structure – roles and responsibilities

The project will be coordinated by Richard McClatchey. The Technical Coordinator will be Andrew Branson (UWE) for years 1 to 2 and Olivier Gattaz (M1I) for years 3 to 4. The main commercial lead will be Patrick Emin of M1i or somebody with the same experience; he will be the Phase 2 leader. Phase 1 leader Andrew Branson or somebody with the same experience, will be the main academic technical lead since he has appreciable experience in developing the CRISTAL kernel. Together these three plus a representative from ALPHA-3i will constitute the Project Management Team (PMT). The PMT will hold face-to-face meetings three times a year at either M1i or UWE and 4-6 weekly teleconferences in order to monitor progress against project goals.

The PMT will interact with the Project Advisory Board (PAB), a body constituted from external experts in the areas of CRISTAL/Agilium and ALPHA-3i. PAB members will include Dr Jean-Marie Le Goff of CERN, one of the original CRISTAL inventors and Regis Dindeleux of SilverProd Services who was the main driver behind the commercialisation of CRISTAL into the Agilium product when at the company Thesame. The PAB will work with the PMT in order to provide input to the analysis phase of the project (Phase 1), monitoring of progress through the design and development phase (Phase 2) and validation of the project outputs during the commercialisation of the project (Phase 3). It is expected that the PAB will meet at least once per year.

Project meetings - scope and timings

The Project Management Team (PMT) will hold 3 meetings per annum as well as teleconferences every 6-weeks. It is suggested that prior to these teleconferences the following report on progress and updates to the PMT: project co-ordinator, technical co-ordinator, Patrick Emin (M1i), Pierre Bornand (Alpha3i).

It is envisaged that the Project Advisory Board meet at least once per year for review of progress of the project and to resolve any issues arising.

Project phases – scope and timings

Most technical development will be conducted at CERN or at M1i. Testing and deployment will be carried out at M1i & Alpha3i. Project initiation and requirements analysis will be facilitated by the project manager and Richard

McClatchey and technical co-ordinator Andrew Branson visiting M1i and Alpha3i during May-August 2012. Analysis-to-design and Kernel developments will be handled by Andrew Branson and Jet Shamdasani during September 2012 to August 2013. In the end phase - from around June 2013 to May 2015 - secondments to UWE will take place to develop domain applications ('modules'). These will be mostly to CERN and, when necessary, to UWE.

UWE will take on an early stage researcher (a PhD student) to spend 12 months at M1i from summer 2014 to summer 2015 and then 12 months at Alpha3i from summer 2015 to summer 2016 to study productisation and deployment.

In the latter stages of the project Andrew Branson and Jet Shamdasani (or equivalents) will oversee the testing and deployment of the CRISTAL Kernel for Agilium V4 roll-out at M1i and Alpha3i.

Senior members of the project (PMT) will be seconded between the partner institutes in the final year of the project for commercialisation, management & planning and project dissemination.

Project schedule

The following guidelines are taken from the 'Documents' section of the participant portal:

http://ec.europa.eu/research/participants/portal/ShowDoc/Extensions+Repository/General+Documentation/Guidance+documents+for+FP7/Other+issues/checklist-coordination-agreement_en.pdf

The production schedule for inter-related tasks and for planning purposes (i.e. when, where and how the resources will be made available).

It is recommended that in their own interests the parties should not establish irrevocable schedules unless they are absolutely sure that these can be met, and to include instead contingency plans for delays or missed deadlines. An irrevocably accepted production schedule could be considered to be a guaranteed commitment and may involve payment of indemnities if not met.

Coordination and managerial provisions

This section describes the provisions dealing with the coordination and management of the management bodies and the decision making process.

It is intended to establish a co-ordination structure (may be called steering committee, liaison committee, management committee, and can be broken down into different sub-groups such as financial, technical, legal, etc) with among others the following tasks:

• to define, divide and develop the tasks;
• to check the progress of the work;
• to co-ordinate the research teams;
• to co-ordinate the preparation of the reports (technical, financial, etc.);
• to advise and direct the partners on the developments necessary for the project;
• to permit formal exchanges of information between the partners.

The work of this steering committee is frequently translated into daily management and representation duties by a co-ordinator(s) selected from among the parties. Other committees can be created as necessary and should report to the steering or co-ordination committee. Provision should be made for their creation when necessary.

Follow-up and Supervision

This section describes how the follow-up and supervision of the projects will take place.

Each consortium undertakes to follow the production schedule in the technical provisions of the project. In view of the evolving character of projects, these production timetables are generally subject to change. To limit the risk, it is desirable to provide for a strict and effective supervision system managed by the coordination structure including:

• frequent progress meetings (ranging from once a month to once per quarter);
• frequent technical and financial progress reports (actions completed and results obtained);
• optional extraordinary meetings as soon as agreed estimated deadlines have been overrun, including the right for the parties to review their position within the co-operative venture based on clearly stated reasons.

Workpackage detail – milestones and deliverables

The following is an outline of the workpackage (WP) objectives and deliverables:

WP1 : Project Management UWE M1-48

Objectives
- To establish and carry out the management of the project,

-        To ensure the overall implementation of the workplan by coordinating all workpackages
-        To monitor progress and report on the project to the EC.

Description of work
T1.1 Establish project procedures (Kick-off meeting, Set up Project Management team (PMT) and Project Advisory Board (PAB), reporting & progress monitoring mechanisms) M1
T1.2 Carry out progress monitoring via regular PMT reviews (every 6 weeks; face-to-face meetings quarterly interspersed with teleconferences, 4 per year) M1-48
T1.3 Interact with PAB for periodic strategic reviews (at annual project milestones). M12, M24, M36, M48
T1.4 Liaise with EC Project officer for deliverables and EC reviews. M1-48
T1.5 Establish and follow dissemination and concertation strategy. M1-48
T1.6 Establish project web-presence (Web-page, content management system, newsletter, posters Wikis and Blogs etc.). M1-6

Researchers involved
Institution's own resources
UWE-ER>10 [15, 3, 6, 18] and M1I-ER>10 [11, 12] will largely coordinate the project management. Bruno Malagola or someone with the same experience and ALPHA-ER>10 [14] from ALPHA-3i will also participate in those activities. Oriane d'Orival or someone with the same experience from M1i will setup and manage the Quality Assurance of the project.

Risk Analysis
The main risk for this Work Package is around the capacity to manage the global project. This will require intensive collaborative work during the whole project. The initial setup of project management rules and tools will be key. A set of document templates will be designed for the project by Oriane d'Orival and a quality insurance system will be put in place for the project duration. Some training session will take lace on those methodological aspects for the whole team involved in the project. The key risk for UWE is to be able to successfully manage the absorption of a large-scale research and development project (CRISTAL-ISE) and the secondment of key resources away from UWE. There is risk associated with the intellectual property that will be created as a result of the CRISTAL-ISE project. Foreground IPR generated via the CRISTAL-ISE project, will be shared between all partners in an equitable and fair manner via a mutually agreed upon formula. A consortium agreement, complying with EC rules, will be put in place at the early stage of the project.

WP2 : Requirements Analysis UWE M1-15

Objectives
- To gather requirements from the CRISTAL user communities in M1i and ALPHA-3i.
- To carry out a review of the current and planned CRISTAL functionality.
- To compile and report on an analysis of the necessary enhancements to the Cristal kernel.

Description of work
T2.1 Gather and analyse clients' requirements from M1i and from ALPHA-3i. M1-4
T2.2 Conduct analysis workshop and brainstorming meetings at design points throughout the WP(Kick-off meeting, preparation for PMTs, at workpackage milestones). M1-15
T2.3 Carry out thorough review of existing CRISTAL kernel functionality and identify how requirements map onto kernel amendments. M3-7
T2.4 Produce an initial analysis model (at M9) and plan and conduct a mid-WP review. M6-9
T2.5 Document staged enhancements needed to the CRISTAL kernel fully. M10-15

Deliverables
D2.1 Main requirements and initial analysis model 2 18 Model Project M9
D2.2 Final analysis document 2 10 Report Project M15

Researchers involved
Marie Curie Fellows
UWE-ER>10 [16, 1, 4] Seconded initially for two months to ALPHA-3i and a further two months to M1i to capture requirements for enhancements to the CRISTAL Kernel, plus a further period of eight months towards the end of Wp2 and the start of Wp3. UWE-ER<10 [2] Seconded to M1i for a period of 12 months to cover commitments to Wp2 & Wp3. UWE-ER>10 [15, 3] Two periods of secondment (of his four) to be allocated to Wp2 & Wp3. M1I-ER<10 [10] Seconded to UWE for a period of 24 months to cover involvement in Wp2, Wp3 & Wp4.
Institution's own resources
Bruno Malagola, the research and development (R&D) team from ALPHA-3i.

Risk Analysis
Risk is in the complexity of the analysis of the Cristal Kernel. Teams need to share a very detailed level of knowledge of the actual concepts of the Cristal Kernel.
The learning curve need to be managed with some concentrated transfer of knowledge. This risk will be covered by training session for the seconded people.
The transfer of knowledge will be shared between 2 phase:
- Transfer of knowledge from UWE about Cristal Kernel concepts
- Transfer of knowledge from M1i on the actual enhancement to Cristal Kernel in actual Agilium product

WP3 : Kernel Design & Devpmt UWE M9-35

Objectives
- To create a single unified version of the CRISTAL kernel that supports both UWE's and M1i's needs.
-        To add additional functionality demanded by the analysis of WP2
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Description of work
T3.1 Technology evaluation: assess replacements for obsolete architectural components. M9-12
T3.2 Kernel consolidation: domain application features generalized enough for kernel inclusion.
M9-24
T3.3 Design: Integrate the above with the result of WP2 analysis and develop a new kernel model.

Produce a design document describing the results of all three tasks. M12-36
T3.4 Implementation: deliver production CRISTAL III kernel. M12-36

Deliverables
D3.1 Initial design document 3 24 Report Project M24
D3.2 Final implementation document. 3 18 Report Project M36

Researchers involved
Marie Curie Fellows
UWE-ER<10 [2] Seconded to M1i for a period of 12 months to cover commitments to Wp2 & Wp3.
UWE-ER>10 [16, 1, 4] Seconded initially for two months to ALPHA-3i and a further two months to
M1i to capture requirements for enhancements to the CRISTAL Kernel, plus a further period of eight months towards the end of Wp2 and the start of Wp3.
ALPHA-ER>10 [13] Seconded for a period of two years to UWE to cover involvement in Wp3, Wp4, Wp5 & Wp6
UWE-ER>10 [15, 3] Two periods of secondment (of his four) to be allocated to Wp2 & Wp3.
M1I-ER<10 [10] Seconded to UWE for a period of 24 months to cover involvement in Wp2, Wp3 & Wp4.
M1I-ESR [9] Seconded to UWE for a period of 18 months allocated to Wp3, Wp4, Wp5 & Wp6

Institution's own resources
Bruno Malagola and R&D team from ALPHA-3i. Oriane d'Orival and R&D team from M1i. UWE-ER>10 [16, 1, 4] and UWE-ER<10 [2] will further contribute outside secondment from UWE.

Risk Analysis
The design phase should take a large attention to the technology evolution. The merging of different evolutions of the Cristal kernel will be a main topic to ensure the CRISTAL-ISE is built on the best solutions.
Some technical issues need to be addressed in term of development methodology. The use of Agile Methodology (Scrum) and central repository for the control of source code are simple tools that can support those risks.

WP4 : Domain Applications Development M1i M15-41

Objectives
- To design and implement the new version of the Agilium suite to exploit the improvements to the kernel.
- To provide suitable modules to support the Agilium software, in the context of its user community.

Description of work
T4.1 Domain application Design definition M15-M24
T4.2 Provide general purpose provenance tools M19-M31
T4.3 Provide distribution management tools (Collaboration mechanism, Computer assignment management tools, Automated load balancing) M22 -M34
T4.4 Provide semantics support tools (Inter-services comprehension tool, Language management, Task meaning management tool) M25-M37
T4.5 Inter-dependence (provenance, distribution, semantics) tools M35-M42

Deliverables
D4.1 Domain Design Document 4 8 Report Project M24
D4.3 Semantics plug-in Release 4 8 Software Project M36
D4.4 Agilium functionalities V4
Release 4 10 Software Project M42

Researchers involved
Marie Curie Fellows
M1I-ER<10 [10] Seconded to UWE for a period of 24 months to cover involvement in Wp2, Wp3 & Wp4.
ALPHA-ER<10 [13] Seconded for a period of two years to UWE to cover involvement in Wp3, Wp4, Wp5 & Wp6
UWE-ER>10 [8] A further secondment of 12 months to cover commitments to Wp4 and Wp6. UWE-ER<10 [7] A further secondment of 12 months to coincide with the end of Wp3 and with involvement in Wp4 and Wp6.
M1I-ESR [9] Seconded to UWE for a period of 18 months allocated to Wp3, Wp4, Wp5 & Wp6

Institution's own resources
Bruno Malagola and R&D team from ALPHA-3i.
Oriane d'Orival and R&D team from M1i.Andrew Branson and Jetendr Shamdasani will further
contribute outside secondment from UWE.
UWE-ESR [5, 17] will work with UWE-ER>10 [6] at UWE in preparation for secondments.

Risk Analysis
The risk is to develop a product that can fulfil market requirements and to implement new research
concepts from the previous phase of the project.
There are then two risks:
• To make a product not in line with market and to miss the "time to market" effect by being too innovative
• To lose the opportunity to embed real new features from a research perspective
Those risks will be covered with a clear definition of domain applications. The experience of Patrick Emin in driving collaborative project in the context of MESTRIA R&D will help (three tier project with seven editors and two research centres during three years). The semantic support will require attention on the market adoption of such technology. Usage studies and contact with both research and market analysis will help to manage this risk.

WP5 : System Integration Alpha3i M31-42

Objectives
- To ensure that each component of the new Agilium suite, including the kernel, are designed together and work together.
- To provide suitable integration tests for the incorporation of the required CRISTAL-ISE improvements.

Description of work
T5.1 Provenance tools (Logger, User Interface, Querying tool, Business Activity Monitoring, User modelling) integration M32-M36

T5.2 Distribution tools (Collaboration mechanism, Computer assignment management tools, Automated load balancing) integration M35-M40
T5.3 Semantics tools (Inter-services comprehension tool, Language management, Task meaning management tool)integration M37-M41
T5.4 Final Systems Integration M40-M42

Deliverables
D5.1 Provenance commercial version 5 6 Software Project M36
D5.2 Semantics commercial version 5 6 Software Project M42
D5.3 Agilium V4 Release 5 6 Software Project M48

Researchers involved
Marie Curie Fellows
ALPHA-ER<10 [13] Seconded for a period of two years to UWE to cover involvement in Wp3, Wp4, Wp5 & Wp6
M1I-ESR [9] Seconded to UWE for a period of 18 months allocated to Wp3, Wp4, Wp5 & Wp6 UWE-ESR [5] Seconded to M1i for 12 months to cover work in Wp5 and Wp6.

Institution's own resources
Bruno Malagola and R&D team from ALPHA-3i.
Oriane d'Orival and R&D team from M1i.
UWE will contribute to Wp5 from UWE's own resources.

Risk Analysis
Key Risk at this stage is about interoperability technologies on which the solution will be based. This risk should be covered by the large experience of the design team from both UWE and M1I team. This Work package will also generate some risks in term of consistency between actual solution and new CRISTAL-ISE from a technical standpoint. This risk is more accurate for Agilium product already using Cristal Kernel technology.

WP6 : Product Commercialisation M1i M31-48

Objectives
- To plan and execute the launch of the new Agilium product suite.
- To ensure that Agilium has a suitable upgrade path for future enhancements of the CRISTAL Kernel.
-        To roll out the new CRISTAL-ISE functionality with ALPHA-3i as the prime beta test users.
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Description of work
T6.1 Converge CRISTAL-ISE developments with the Agilium product suite road-map. M31-48
T6.2 Coordinate joint test plans to ensure effective integration of CRISTAL III and Agilium. M37-48
T6.3 Schedule Agilium product delivery with alpha, beta and general availability releases. M37-48
T6.4 Coordinate Agilium product to ensure scheduled releases address market demands. M31-36
T6.5 Engage with beta customers to provide suitable support and early stage training. M42-4
T6.6 Conduct end-of-project product review and establish future development road

map. M47-48

Deliverables
D6.1 Interim Agilium roll-out plan 6 4 Report Project M42
D6.2 Final Agilium road map 6 5 Report Project M48

Researchers involved
Marie Curie Fellows
M1i-ER>10 [6] Seconded for two periods of two months at strategic points in the project. Responsible for overall Project Coordination and liaison with the EC and for dissemination. M1I-ESR [9] Seconded for a period of 18 months to UWE to cover involvement in Wp3, Wp4, Wp5 & Wp6 UWE-ESR [5, 17] Seconded to M1i for 12 months to cover work in Wp5 and Wp6 and seconded to ALPHA-3i for 12 months to cover commitments to Wp6 and Wp7. UWE- ER>10 [8] A further secondment of 12 months to cover commitments to Wp4 and Wp6. UWE-ER<10 [7] A further secondment of 12 months to cover commitments to Wp4 and Wp6

Institution's own resources
Bruno Malagola or someone with the same experience and R&D team from ALPHA-3i. Oriane d'Orival or someone with the same experience and R&D team from M1i.
UWE-ER>10 [18] will be further involved at 10% from his Institutions' own resources.
M1i-ER>10 [12] will be further involved at 10% from his Institutions' own resources.

Risk Analysis
The key topic in terms of risk is to have a clear product definition for targeting the first use case in the M1i and ALPHA-3i market.

This covers:
• Market risk in term of product definition, product features and
• Market identification in term of domain (Aerospace, Industry, Human resources…)

This risk should be managed by market studies and relations with analysts (Gartner, Boston Group, CXP…). This risk can be reduced by involving some key customers from both M1i and ALPHA-3i at an early stage of the project.
The setup of a "vanguard" user group can help on this topic by driving the project on some concrete demonstration of CRISTAL-ISE concepts.
The support of Cluster Edit (cluster focussed on software development in Rhone Alpes – France) can offer a large audience (more than 300 members) for this.

WP7 : Dissemination/Outreach Alpha3i M1-48

Objectives
- To devise a suitable dissemination strategy and outreach policy.
- To promote the project both commercially and in the academic world.

Description of work
T7.1 Preparation of academic papers and conference reports throughout project. M1-48
T7.2 Identification of suitable case studies and lecture materials for UWE teaching modules. M37-
48
T7.3 Preparation of CRISTAL/Agilium White Papers and web-site information.

M25-30
T7.4 Project flyers, marketing information and posters. M7-24
T7.5 Attendance at trade shows and identified market events. M1-48

Deliverables
D7.1 Academic dissemination materials 7 5 Reports Public M24,M48
D7.2 Commercial marketing and
promotion materials 7 6 Reports Public M48

Researchers involved
Marie Curie Fellows
M1I-ER>10 [11, 12] Seconded for two periods of two months at strategic points in the project. Responsible for overall Project Coordination and liaison with the EC and for dissemination. UWE-ER>10 [6, 18] Seconded for two periods of two months to M1i or ALPHA-3i to coordinate project initiation, reviews and overall technical management and for dissemination. ALPHA-ER>10 [14] Seconded for one period of two months to UWE to facilitate the process of dissemination and outreach. UWE-ESR2 [17] Seconded to ALPHA-3i for 12 months to cover commitments to Wp6 and Wp7.

Institution's own resources
Bruno Malagola or someone with the same experience and R&D team from ALPHA-3i. ALPHA-ER>10 [14] and commercial team from ALPHA-3i.
Oriane d'Orival or someone with the same experience and R&D team from M1i.

Henry Romagny or someone with the same experience and commercial team from M1i.
UWE-ER<10 [7] will contribute to WP7 from UWE's own resources.
UWE-ER>10 [8] will be further involved at 10% from his Institutions' own resources.
M1I-ER>10 [11, 12] will be further involved at 10% from his Institutions' own resources.

Risk Analysis
The key risk is about the dissemination methodology. The goal is to have a significant effect on the market for both M1i and ALPHA-3i products.
This requires a clear identification of ways to deliver products based on the CRISTAL-ISE new software. Topics to be covered are:

• Business model in term of software dissemination (open source…) and
• Generation of a large community to support the coming technology

BPM market trends and directives could shift dramatically away from the objectives of the CRISTAL-ISE project i.e. the semantic enhancement of the CRISTAL kernel and the interoperation of multiple instances of the Agilium product.
From a marketing perspective, both ALPHA-3i and M1i will be actively promoting and discussing the CRISTAL-ISE functionality with customers, prospects, analyst and academic communities since it will be an important component of the Agilium product roadmap. Dissemination will also cover research aspects. UWE will come with a defined strategy of publications and conferences.

Accountability and reporting

Reporting Summary

Reports	within 30 days after 12 months	at least 30 days before Mid-Term Review	within 60 days after 24 months	within 30 days after 36 months	within 60 days after end of project	within 30 days after Final payment
Progress report *(PP- reporting & deliverables)*	X	X		X		
Periodic report:						
• Periodic report *(PP- reporting & deliverables)* - by Coordinator			X		X	
• Financial Statements, Forms C *(PP-financial reporting)* - by each beneficiary			X		X	
• Summary Financial report *(PP-financial reporting)* - by Coordinator			X		X	
• Certificates (if required) *(by mail only)* - by each beneficiary			X		X	
Final Report *(PP- reporting & deliverables)*					X	
Distribution report *(PP- reporting & deliverables)*						X

Dissemination and outreach

A separate Dissemination and Concertation strategy document exists to guide the management of the project in this area. The following highlights some of the deliverables it is envisaged that will exist for the project in this area:

- CRISTAL-ISE Lab blog and Web site
- CRISTAL-ISE project and team via a dedicated Web presence
- Research and Technical Outputs
- Conference papers and journal articles
- 'White Papers' and industry events
- Vanguard User Group
- Industry Agilium end-users
- Relation with Cluster Edit org. in Rhone Alpes
- Publication of the 'CRISTAL-ISE book'
- The history of the project; best practice & how-to-do-it