European Ground Systems – Common Core

Software Requirements Review Invitation for Participation

The European Ground Systems Common Core (EGS-CC) is an initiative of ESA together with the European Primes and National Space Agencies for the joint definition, development and exploitation of a set of software building blocks for next generation Electrical Ground Support Equipment (EGSE) and Mission Control Systems (MCS).

Primes have today several proprietary EGSE solutions that they use for ESA missions and for their commercial and non-ESA institutional missions. ESA uses SCOS-2000 for MCS and SCOS-EGSE for many EGSE applications. The current generation of EGSE and MCS systems is facing obsolescence. The costs of ownership of the existing systems, which duplicate the same function, are significant. The systems are generally incompatible which makes seamless transition of data and test/operational procedures impossible. This applies as well within a project as between projects.

Consequently, using a common core for EGSE and MCS would significantly reduce facility cost of ownership as well as the operational cost and risks to space projects.

Other advantages can also be expected for European Industry at large out of this initiative:

- Support the competitiveness of European Industry when supplying end-to-end space systems on the world market.
- Allow Small and Medium Enterprises ("SMEs") to operate in a product oriented market, supplying quality products within a standardised framework
- Enable synergy and reuse of facilities between institutional and industrial/commercial programmes.

Phase A of the EGS-CC initiative ended in 2012 with the successful completion of the System Requirements Review (SRR). Work in Phase A was carried out by the SET and included the production of the Requirements Baseline (user requirements). The SRR involved the main stakeholders of the EGS-CC: ESA, Primes and national agencies (CNES and DLR). Since then, the initiative has moved into Phase B which is currently well under way and is approaching the next major milestone which is the Software Requirements Review (SWRR). This review will focus on the software requirements for the EGS-CC, the preliminary interface definitions and the conceptual data model but will also include a preliminary definition of the system technology baseline as well as a part of the architectural design. The latter, however, will be fully reviewed at the Preliminary Design Review.

The specific objectives for the SWRR are:

1. Ensure the completeness of the software requirements and the conceptual data model, with regard to the user needs defined in the Requirements Baseline (output from Phase A).
2. Ensure the internal consistency of the software requirements and their consistency with the Phase A outputs.
3. Ensure the suitability and consistency of the Technical Specification, which includes the software requirements, the architectural design, the preliminary interface definition and conceptual data model to proceed with the detailed design, implementation, verification and validation of the EGS-CC products.

NOTE: the architectural design and preliminary definition of interfaces will not be complete at the time of the review but a substantial part of it will be available. These items contribute to the overall judgement of the suitability of the Technical Specification and for this reason they are included in the SWRR although they will not be complete.

4. Ensure the ability of the selected set of technologies to be used in the development of the EGS-CC products to meet the software requirements, based on the technology evaluation carried out.

5. Ensure the adequacy of the integration and test plan to proceed with the development of the EGS-CC products.

The review will take place in November and December of 2013 and the schedule for the review is as follows:

<table>
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<tr>
<th>Event</th>
<th>Date</th>
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<tr>
<td>Start of review (distribution of data package)</td>
<td>04 November 2013</td>
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<tr>
<td>Review kick-off presentation at ESOC, Darmstadt, Germany</td>
<td>07 November 2013</td>
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<td>Deadline for RID submission</td>
<td>29 November 2013</td>
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<tr>
<td>Review meeting at ESOC</td>
<td>11-13 December 2013</td>
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<tr>
<td>Review board meeting</td>
<td>19 December 2013</td>
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Following a decision by the EGS-CC Steering Board, the SWRR will involve the EGS-CC main stakeholders but will also be open to contributions from the European space software industry in general.

If your company wishes to participate in the review, you are invited to register by sending an email to Kathleen.Gerlo@esa.int with the subject ‘Registration for the EGS-CC SWRR’ and containing in the message body the name of the company and the name and email address of the person who will act as focal point for the reviewers in your company (only one representative per company can be registered in the review system).

Participating companies will be expected to review the data package and submit RIDs. Their focal point may be contacted to arrange participation of specific company reviewers in relevant discussions during the review meeting, either in person at ESOC or remotely via WebEx.

The deadline for registration is 25th October 2013.

Registered companies will receive further information on the review via their nominated focal point, including details about how to participate in the review and how to access the data package.