

To Engineering Advancement Review Board

Date 11 February 2006

From Oliver J. Liggins

cc

Subject **MEMBER OF TECHNICAL STAFF (MTS) II (SG 23)**

This memo is intended to document for your consideration the progression/promotion Oliver J. Liggins (from Member of Technical Staff MTS I (SG 22)) based upon the experience, capabilities and performance summarized below:

**Education, Experience, and Performance and Advancement Criteria:**

Criteria:

- One year and half course work for Master Degree in Computer Science.
  - Bachelor Degree in Mathematics
  - AA Degrees in Computer Science
  - Two and half years as MTS I.
  - Fully competent, sustained performance demonstrated as an MTS I with performance ratings of at least "Outstanding " performance during the previous two review periods.
  - Demonstrated potential based on work history to assume higher level responsibilities.
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- Oliver J. Liggins holds a Bachelor Degree in Mathematics from California State University at Hayward, California.
  - Oliver J. Liggins holds an AA Degree in Computer Science from Merritt College in Oakland, California.
  - Oliver J. Liggins has been performing work as a MTS I and higher for over two and half years.
  - Oliver J. Liggins has been supporting GSD programs since 2003 with performance ratings of "Outstanding" for two reviewing periods.
    - 2003 –2004– Outstanding
    - 2004 –2005- Outstanding
  - Oliver J. Liggins has taken courses at San Jose State University graduate program in Computer Science. He has taken courses at UCSC courses, qualifying for the Certificate in Object Oriented Programming and Analysis and has taken courses at Santa Clara adult education in Software and Automation Testing.
  - Oliver J. Liggins has over 8 years in software design, coding and unit testing in both Functional and Object Oriented languages. He has extensive experience with software engineering in embedded control systems. He has experience in software development of embedded systems both for the commercial and military use.
  - Oliver J. Liggins has over 16 years of system and software testing. He has extensive experience with subsystem/vehicle integration and test. He has experience in testing of embedded systems both for the commercial and military.

- Oliver J. Liggins has over 10 years of system and software engineering for a complex satellites program. He was responsible for writing both system and software requirements.
- Oliver J. Liggins has supervised the software test group.
- Oliver J. Liggins successfully managed the total project life cycle from truth of conception, requirements, implementation, production, fielding, and training; building organizations to support the activities and providing the technical leadership.

## Technical Breadth, Problem Solving and Decision Making:

### Criteria:

- Routinely writes and presents technical papers to enhance the company's reputation.
- Recognized within UDLP as an authoritative resource in a specialized technical area, demonstrates thorough knowledge of division products. Routinely provides technical consultation or advice to others, including recommendations on technical approach on major projects.
- Demonstrates in-depth knowledge of a specialized technical area or broad knowledge across multiple technical disciplines/applications. Displays state-of-the-art familiarity with the latest available engineering/scientific technology in the technical field. Demonstrates ability to integrate information to more than one technical discipline and to complete difficult assignments within field of expertise.
- Demonstrates thorough knowledge of systems engineering; e.g., human factors, safety, reliability, maintainability, producibility, and cost analysis. Guides a system of approach to the work performed; resolves conflicts within individual subsystems to the benefit of total system performance, quality, cost, and reliability.
- Identifies, defines, and resolves problems in differing situations involving conflicting design/contractual/policy or technical requirement across functional areas and with difficult coordination requirements. Uses existing principles, knowledge, and state-of-the-art technology to solve highly complex analysis, design, integration, or technical problems.
- Develops solutions to problems that require extensive investigation and clarification. Existing process, procedures, or methods often require extensive modification to develop appropriate solutions.

- Oliver J. Liggins authored a training package of how to “Write Good Requirement Base Test Cases”. This course was taught by Oliver J. Liggins to the Software Test Group. This course will be place on the internet.
- Oliver J. Liggins is recognized within BAE Systems, as an authoritative resource on Software Formal Testing. He has demonstrated his in-depth knowledge of DOD-STD-2167A, MIL-STD-498 and IEEE Standards by tailoring Software Formal Test programs to the special needs of A3, Grizzly, A3BFIST, and Crusader programs.
- Oliver J. Liggins has applied state of the art tools for MIL-STD-1553B bus communications as a basis for A3, Grizzly, A3BFIST, and Crusader testing. These include BBN Probe, internally developed bus monitors, and commercial bus protocol analyzers.
- Oliver J. Liggins validated the CSIL models by using the bus monitor to simulate the CSIL simulated LRUs.
- Oliver J. Liggins demonstrates his ability to integrate information from multiple disciplines and apply it in an effective, precise manner. While assigned to A3 he developed tests based upon inputs from engineers in the following disciplines; controls, human factors, safety, systems, and software.
- Oliver J. Liggins applies his knowledge of system engineering approach to Software Formal Test with particular focus on human factors and human and vehicle safety. Using a relational database from the A3BFIST program, Oliver J. Liggins embellished the database to prioritize tests for safety critical and safety related requirements

## **Accountability, Management Skills and Market Awareness:**

### Criteria:

- Responsible for guiding and overseeing the preparation of the technical portion of proposals related to area of expertise. Assists in determining project objectives to incorporate emerging technology into products.
  - Initiates and maintains external contacts with key experts and officials of other companies, national labs, and government agencies.
  - Responsible for large projects or specialized technical assignments including appropriate technical documentation, cost, and schedule and meeting contractual, UDLP, and customer defined requirements. Provides leadership and technical guidance to other engineers. Establishes technical objectives and milestones, and monitors performance of others.
  - Guides others in understanding needs and priorities of the customer. Understands how to approach work to maintain competitive advantage. Analyzes the industry and business environment and uses knowledge in the work performed. Displays sound understanding of UDLP's business objectives and represents UDLP in various capabilities.
  - Displays a good working knowledge of human resources, engineering administration, and other systems.
  - Works with general guidance but independently determines the best approach for solving a problem. Work is reviewed periodically to determine the extent to which pre-determined objectives were met. Ongoing activities are self-managed. Considerable latitude for unreviewed action or decision making.
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- Oliver J. Liggins was responsible for the Software Formal test aspect of the APS proposal and successfully responded to 1 round of cost cutting through careful selection of test philosophy and careful reduction of scope. Oliver J. Liggins was the key technical contributor in 1994 for A3 source selections, analyzing over twenty proposals, offering keen insights into the technical [and managerial/cost].
  - Oliver J. Liggins maintains close contacts with AMCOM representatives and is a member of the DOD Test and Evaluation Community Network. Oliver J. Liggins has received the highest Customer recognition from the top level of TACOM for his effective building of the software test expertise and environment at the Bradley A3.
  - Oliver J. Liggins is currently responsible for the planning, preparation and conduct of the contractually required Software Qualification Test (SQT) on three programs, A3, A3BFIST and ODS-BIM. In addition, Oliver J. Liggins is cost account manager for A3BFIST and ODS-BIM SQT efforts. Oliver J. Liggins provides leadership and guidance to test engineers assigned to these programs.
  - Oliver J. Liggins conducts weekly meetings status and resource meeting.
  - Oliver J. Liggins provides mentoring to new test engineers and rapidly brings them up to speed on the contractual significance of the software formal test.
  - Oliver J. Liggins needs only general guidance and self directs his work toward the software formal test objective.

## **Communication and Interpersonal Skills:**

### Criteria:

- Demonstrates consistent ability to communicate clearly with others for a variety of purposes.
  - Prepares and presents briefings to top management and customers; guides others in preparing briefings.
  - Conducts effective meetings and discussions.
  - Demonstrates courtesy and effectiveness in dealing with others.
  - Routinely recognizes the contribution of individual employees in team efforts.
  - Displays consistently effective interpersonal skills required in working with others to achieve goals.
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- Oliver J. Liggins is acknowledged to be an excellent technical writer. He is capable of expressing complex written test descriptions as well as providing comprehensive technical description.
  - Oliver J. Liggins regularly presents technical briefings to the customer at program milestones.
  - Oliver J. Liggins recognizes both positive and negative contributions of individuals in team efforts.
  - Oliver J. Liggins maintains a warm personal relationship with his co-workers while staying focused on the business at hand.