



## Cerenade puts NASA R&D Communication into Orbit

NASA's Scientific and Technical Information (STI) program office identified that they had a very earthbound problem with the forms-based process used to approve author submissions of research. It didn't take STI, the office responsible for the development of NASA business processes, long to determine that they needed to find a way to create a browser-based, multi-user, eForm-centric workflow using intelligence to automatically route to the next "approver" based on how the previous approver responded.

It seems that they found themselves in the position where the electric forms solution that NASA had been using was no longer going to be supported by the vendor. So now – faced with the necessity for change - they needed a single form that could handle a series of complicated workflow scenarios. The challenge was identifying a web-based solution which could integrate with other applications and take advantage of new technologies.

When Lawrence Reeve at NASA's Ames Research Center was tapped as project lead and assigned the task of finding a versatile eForm-centric workflow solution, there were certain conditions that needed to be met. Not the least of which was that the solution should be:

- A complete functionality match to the existing solution
- Cost-effective
- Flexible in interacting with other systems
- Secure given the highly sensitive R&D data being approved.

After an intensive proposal and review process, Reeve's search led him to choose and implement Cerenade's Visual eForms Enterprise Solution in August of 2010.

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## About the Ames Research Center

The Ames Research Center became part of NASA in 1958 and is one of NASA's 10 field facilities. With thousands of research personnel and a \$600 million annual budget, the facility is intricately involved with all missions performed by NASA in support of the aeronautics and space program.

ARC is also a leader in IT research that focuses primarily on supercomputing, networking and intelligent systems. ARC concentrates on vital R&D to create technologies that make NASA's ongoing missions achievable.

## The Approval Process Workflow

Cerenade offered ARC the very best option to bring a functional eForm-centric workflow solution to agency users and make a secure process available.

Since ARC is a highly secure government R&D facility, before any research can be released it must go through several layers of approval. The research then gets housed in the Center for Aerospace Information (CASI) where researchers working on particular projects can request access to it. The eForm-centric workflow that was created is the process by which the data is cleared by NASA for release and, then, made available to other researchers.

Several layers of approvers were impacted by the implementation of Cerenade's solution:

1. The process kicks off with the author of the research submitting an online approval request using Cerenade's Visual eForms Enterprise Solution. The abstract or presentation is also attached with the submittal.
2. The eForm data is extracted for reporting and then is routed through NASA's technical management and requires three unique approvals:
  - a. Subject matter/ R&D experts ensure that all regulations pertaining to information sharing are followed (e.g., "NASA only" or "Contractors only" classifications) and validate that none of the information released is detrimental to ARC or NASA.
  - b. Next the Office of Legal Counsel must review the data to ensure there has been no copyright or patent infringement.

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### ARC conducts R&D on

- Nanotechnology
- Fundamental space biology
- Biotechnology
- Aerospace and thermal protection
- Astrobiology
  - Effects of gravity on living things
  - The nature and distribution of stars and planets
  - Life in the Universe

c. Finally, Export Control ensures that all federal traffic & arms regulations and federal mandates pertaining to the data and technology are followed before it can be released to the public. More importantly, they review Export Administrative Regulations (EAR) which controls access to specific types of technology so that sensitive data isn't released to foreign nationals.

3. Once approvals in #2 are completed, the author's submittal is released to the Center for Aerospace Information (CASI). The author is notified that their research has been approved. Once the approval process is completed, the eForm and associated documents are archived.
4. CASI houses all author submitted research and is the gatekeeper for releasing research to other approved researchers.

### How Cerenade Stands Apart

According to Reeve, Cerenade's Visual eForms Enterprise Server stood apart from the competition because it:

- Handles Entrust (signature mechanism)
- Is web-based for maximum access on a wide variety of platforms such as Windows, Mac, Unix/Linux, iPad and Android
- Affords favorable price/performance comparisons
- Has the best form interface (form creation) and design interface
- Had the ability to convert from their existing application
- Enabled ease in designing workflow
- Integrated with other applications
- Connected to existing databases

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## About Cerenade

Cerenade offers proven, enterprise-wide Integrated Forms Management Solutions to business, government and legal organizations. We offer the best electronic forms technology and we have successfully deployed our solutions enterprise-wide, including deployment of global and domestic retail and corporate locations. With Cerenade, organizations can automate outdated paper systems ... or migrate - seamlessly and cost-effectively - from other less flexible forms processing solutions. This invaluable technology is production class, non-proprietary and user-friendly ... and, most importantly, offers immeasurable value and is a solid return on investment.

*"Cerenade improved our operations. We had a system prior to Cerenade's Visual eForms Enterprise Server that was a form-based application. So, we looked at similar applications, including Adobe, Cerenade and Infopath. Cerenade met our requirements the best in all areas."*

-Lawrence Reeve

The only challenges that Reeve identified with changing over to Cerenade services were the learning and implementation of a new application across their rather large R&D community and issues such as learning the new programming environment. However, even these challenges were made easier with plenty of documentation, along with assistance from Cerenade's professional support staff. He also stated that Cerenade lent their expertise in transitioning and creating the new approval submittal eForm using data provided from their prior application. In summary, Reeve stated:

*"The strength of this product comes from its ability to integrate with other applications and its ability to conduct web services through dependable and secure connections to databases. Plus, we've been able to migrate users to the new system very easily with a minimum of issues. Cerenade's solution fit our requirements perfectly."*

Cerenade is in use at four NASA Centers: Ames Research Center, Dryden Flight Research Center, Glenn Research Center, and Goddard Space Flight Center.



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