

State of Virginia adopts ACES

2009

Brief Project Summary

The Department of Mines Minerals and Energy (DMME) in collaboration with the Virginia Department of Transportation (VDOT) and the VITA Enterprise Applications Division (VEAD formerly VEAP) have piloted the methods, tools, and services which allow customers and internal employees to digitally sign, seal, and submit electronic documents using Public Key Infrastructure (PKI) based digital signatures from the federal ACES certificate program through IdenTrust. It was implemented by DMME in mid-2008 and VDOT in Early 2009. The use of Digital Signatures significantly reduces the costs and environmental impact of producing, copying, delivering, and maintaining traditional paper documents by allowing the electronic management, delivery, file storage, and submission of officially signed and sealed document submittals. Digital Signatures also benefit the Commonwealth Agencies and its customers by enabling rapid delivery, online submittal, accessibility by geographically distributed staff, as well as a reduction in handling, scanning and receiving costs.

Business proposition:

DMME and VDOT currently receive paper documents that require official seals and wet signatures in order to comply with Federal and State laws, policies, and requirements. In order for DMME to establish a fully electronic document submittal process, a legally binding, "low cost" digital signature process had to be established. Due the fact that DMME and VDOT share private engineering companies as customers, a common solution was determined to be in both agencies best interest.

The cost of maintaining and acquiring digital signature technology for small- and medium-sized businesses has traditionally been a barrier to this goal. Due to the limited use of digital signatures in the Commonwealth of Virginia agencies, large businesses are even hesitant to invest in products and services to allow digital signatures. Additionally, DMME had mandated that electronic copies of maps be submitted to DMME as part of its permitting and licensing processes for surface and underground mines. This resulted in very few certified and legally binding electronic document submittals to agencies. As a result, customers continued to send both paper and electronic copies of official maps and documents. This increases the cost of doing business for both DMME, VDOT, and the industry customers it serves. As a result agencies must handle paper maps and documents, review them, and scan them into digital formats. Commonwealth customers and state employees are required to copy, print, sign, mail, and handle these in paper formats, increasing costs to operate and delaying delivery of customer services, as well as slowing internal agency processes.

Innovation and technological merit:

Digital signatures, through the use of security measures such as Public Key Infrastructure (PKI), are designed to establish identity by employing a third party Certificate Authority to provide signature authentication. Virginia Executive Order 65 mandates that Executive Branch agencies and institutions to take advantage of the benefits of digital signature technology to the fullest extent possible. The DMME, VDOT, and VEAD pilot is the first

implementation for the receipt of PKI based digital signatures from customers and employees of the Commonwealth. This effort is a groundbreaking collaboration as the first Virginia agencies to implement a digital signature based process for both customer and internal commonwealth employee use. This effort is also innovative due to the nature of the collaboration between DMME, VDOT, and VEAD to develop, plan, design and rollout this technology. It was initially established through a common desire to create a digital signature methodology which was acceptable throughout the Commonwealth. The Federal ACES certificate program was established by the General Services Administration to allow the public and business partners, vendors and agencies to securely conduct business over the Internet.

Utilizing the Governor's Productivity Investment Fund (PIF) process to request funding led to the collaborative solution we have between DMME, VDOT and VEAD. The PIF process provided a platform to share ideas and to gain senior leadership support for this innovative technology.

The lack of a low-cost, widely recognized, and standardized method for submitting these types of electronic documents has hampered the implementation of electronic document submittals. Although electronic signature in forms has been accomplished, the use of digital signatures on more complex electronic document submittals has been extremely limited or non-existent. The current Federal ACES program could be implemented at little or no cost for agencies to immediately utilize digital signature technology in their business processes.

Value:

Industry customers submitting maps and plans to any state agency will save significant time and money by submitting them electronically rather than on paper. Electronic submittal requires a means to apply a verifiable digital signature for documents and an electronic seal such as a Professional Engineer's seal. The average cost for the industry to create, print, and deliver a Professional Engineer sealed paper map is over \$16 per hardcopy map. The cost for a standard signed paper document is estimated to be over \$10 per document. DMME estimates that it receives approximately 500 signed/sealed maps and plan documents per month. DMME and VDOT have will benefited from the implementation of digital signatures as well. We estimate the time of comparing paper and electronic submittals, as well as the elimination of document scanning to be a significant timesaving to our agency staff as well as to customers submitting the documents.

A simple cost estimate of savings to our customers would be based on 300 paper maps per month at \$16 each, which would equal \$4800 per month; 200 plans at \$10 each would equal \$2000 per month. The yearly cost would be \$6800 *12 or \$81,600 per year for all customers. The cost for the digital certificates to support digital signatures to the customers would be \$60 per year per customer for an unlimited number of electronically submitted documents. The customers would also benefit from the elimination of paper document handling, as well as timesaving's and possible delivery costs/mail costs. DMME considers the cost savings a value to the agency, but the costs would be soft costs in the terms of time and effort of DMME staff. Savings have been estimated to be approximately \$5 per map/document to handle scanning, filing and receiving.

The most critical part of this effort is the cost savings to the customers/industry, making them willing partners in this initiative. Meetings with engineering providers have resulted in unanimous support for this effort. Customers have expressed a serious interest in the

ability to submit electronic documents digitally signed in a similar fashion to other state and federal agencies.

Success:

To date this project has been a resounding success. DMME has been extremely satisfied with the rollout and implementation of this project. The cost to the agencies for this project has been nearly nothing as each private engineer or industry customer submitting digitally signed documents are responsible for the purchase and renewal of their businesses digital certificates. DMME's Gas and Oil Division now receive 100% of their Gas Well plats electronically. DMME's Division of Mines and Mined Land Reclamation receive roughly 25% of their maps and plans with digital signatures with increasing numbers of users on a monthly basis.