



THE VIRTUOSOS

a newsletter from

CC INTELLIGENT SOLUTIONS, INC.

WELCOME

2009, Quarter 2 Issue 3

We're excited to publish our third quarterly SOS Newsletter, called VirtuoSOS. We hope this issue continues to help you build upon your exceptional technique or ability, and reinforces you as a "virtuoso" with regard to your day-to-day work in the SOS community.

I have one simple request. I'm asking that everyone provide more feedback to help ensure this newsletter is hitting the mark and adding value to your SOS initiatives. In the past, you have inquired about web accessibility standards and cloud computing, and our user experience and technical teams have delivered. Now they are interested in tackling new tasks and are eager to hear your other thoughts and concerns regarding your daily headaches and long-term challenges. Feel free to reply to this newsletter, asking them questions that you would like outside experts to address in a one-on-one setting or in our upcoming newsletters. Chances are, the questions that you are yearning for an industry partner like CCIS to address are questions that your counterparts also want us to address. Please ask.

In the meantime, we hope you enjoy this newsletter installment.

Sincerely,

Julian Bossong, COO

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EDITORIAL

We continue to show our support of IACA by including an article by Randy Moes, IACA President. I agree with Randy – even though there were severe travel restrictions this year, the IACA Conference in Colorado was a marked success. Thanks to all who made the Denver IACA Conference possible. I hope everyone can attend next year’s conference in the great state of Texas and as more information becomes available, I am sure Randy will relay that in future VirtuoSOS issues.

Two articles addressing topics of definite interest to you – Business Information Sharing and Quality Assurance Programs as applied to the Secretary of State - have been included in this VirtuoSOS issue. Rather than imposing a parochial view on these topics, I am pleased that one of your confreres, Tom Wrosch from Oregon, agreed to provide his view of how registration programs have shared information with other agencies, and how information sharing continues to expand. Thank You Tom! Additionally, Dr. William Shaffer, President of Waysys LLC has kindly agreed to provide his view on Quality Assurance. Please e-mail them directly should you wish additional information.

As to a topic that is foremost in my mind, it is that of Automated Filing Security. Recently, I overheard the statement that it is much easier to commit fraud in an automated filing system than in a paper one. Obviously, if an automated filing system is designed and implemented with no security features in mind then yes it is much easier to commit fraud in the automated system. A simple checked statement saying that under penalty of law, you are who you are and that you have entered truthful information, may not be enough of a deterrent to prevent fraud, especially if there is no way to track the source of entry on a filing. I realize that identity verification may or may not be within the

jurisdiction of a given SOS and if not then there may be no choice but to have a simple statement checked. However, there are simple processes that may be considered to enhance filing security.

As a suggestion, when an initial filing occurs, the person performing the filing (via a user id and password) could list a set of user id’s that already exist in the system that have permission to alter the filing later. These user id’s related to authorized users can be updated at any time – adding new user id’s or deleting existing ones – by people with authority to do so. This would greatly narrow the people who can alter a filing and would, in effect, make it harder to commit fraud via the online system as compared to a paper system.

In the case of folks that don’t access the system very often (e.g. once per year for an annual filing), a “forgot user id” link could be provided that prompts for an email address and emails the user id associated with that email address to that email address. In addition, a “forgot password” link could be provided that asks for a user id, then emails a new password to the email address associated with that user id. The user can then change that password when they log in. Thoughts?

Now for the disclaimer: Please note that CCIS is continually bringing you a diverse spectrum of authors and content. We naturally recommend that you consult with your local experts on these matters as well, as we really cannot be responsible for the content provided to us by contributing writers. Should you have any issue with specific content, please contact the author directly.

Ted Paczek
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Another Great Year for IACA!

In May of this year, the International Association of Commercial Administrators (“IACA”) concluded another successful conference in Denver, Colorado. As we conducted the roll call, I made notes on who was there. My notes show that we had 35 jurisdictions, 5 Canadian provinces/territories and 8 countries in attendance. This was a great turnout!

I again wish to express a special **“Thank You!”** to all of our wonderful sponsors who participated this year. It is due to your continued support that IACA is able to report our great success in Denver.

With the Denver conference successfully behind us, I want everyone to start looking ahead and planning for next year. IACA will be holding its 33rd annual conference May 23-28, 2010 in **Austin, Texas**. We are already looking at some exciting events for our attendees and urge everyone to join us.

Finally, I would request that everyone take a few minutes to respond to the IACA Member Survey or the IACA Sponsor Survey. The feedback received will be used in our upcoming Conference Planning Meeting in October. This information provides the Board of Directors with the essential input required to make every IACA Conference better than the last.

I WILL SEE YOU IN AUSTIN!!!

Randy Moes, IACA President

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BUSINESS INFORMATION: SHARE AND SHARE ALIKE

In the last twenty years, business registration programs in this country, and all over the world, have progressed from storing paper files in folders and rotary card cabinets to collecting XML data and PDF-A images stored on enterprise computer systems. This information has gone from being available only by filling mail and counter service requests to additional service via fax, direct network access, and the internet. Evolving technology has enabled services to more individuals, government agencies, and private companies than ever before. Within a generation, immediate access to information has expanded from a relatively small group close to the capitol to literally anyone anywhere in the world. This article will briefly explore how registration programs have shared information with other agencies, and how we continue to expand our outreach and accessibility.

One of the first innovations to information sharing was the copy machine. Xerox copiers easily allowed requesters to get document files for court cases and investigations. As records became more easily reproducible, agencies received more requests for access to bulk records. When document storage went to microfilm and microfiche, it became possible, and even common, to run additional copies of film and sell them to service companies and state agencies, such as licensing and other regulatory bodies.

Computer databases, however, allowed a quantum leap in data sharing. Not only could the information in the computers be repurposed (along combinations of variables) for reports, but the media itself was shared. Many an agency got data batches (such as “new filings per week”) transferred by media swap, e.g., floppy disk, magnetic tape, and CD. Data was also uploaded by ftp and even sent by e-mail. Many of these methods are still used today.

Even before the Internet, agencies were offering access to their database via direct dial by modem, usually for a fee, to limited subscribers. Oregon, for example, had the RAPID system in 1989, which allowed customers to dial in, then the computer would disconnect them and dial back, giving them access to UCC, EFS and Statutory Lien data. It wasn’t until 1996 that customers in Oregon got access to a mirrored search engine through the Web.

Who are these “customers”? In Oregon, they include the Department of Revenue, the Department of Employment, the Construction Contractors’ Board, the Workers Compensation Division, and the Department of Justice. These agencies have a long-standing working relationship with our office that goes back years before the Web, and today their processes are more integrated with ours than ever before. Law enforcement agencies have been especially eager to access the information about businesses that we collect, and the private sector has always seen a healthy marketplace for this information. Sometimes, the customer is a service agency trying to help its client manage its far-flung filings. Often, it is a business repackaging information for marketing and other purposes.

Oregon, like several states, has a web portal, called the Central Business Registry, which includes six agency partners. When customers want to start a new business, they get licensing, business formation, and other information from this site, and they can register a business with the Corporation Division. If they will have employees, they can also file a Combined Employer Report with the Revenue and Employment departments. Our plans include adding the Tax Identification Number registration with the IRS, licensing with state agencies, and local government information and filing. The idea is to share information that is common to all registrations, so that the customer only has to go to one



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spot and enter the information just once. Not only is this simpler and more efficient for the customer, it increases compliance and consistency of information for the agencies, and the expense of an online presence is shared among the members.

This kind of simplified, common-data sharing program is far from unique. Filing offices are very motivated to bring data together in the most cost effective, customer-friendly, and efficient methods possible. There has been a real revolution in the breaking down of agency “silos” and a lowering of barriers to data access.

Internationally, some registries have taken it even further, and encouraged not just intrastate data sharing, but even interstate. The Canadian provinces of British Columbia and Alberta share a common registry, as do the countries of New Zealand and Australia, in the sense that filing in one jurisdiction automatically qualifies the business in the other place. New Zealand is also providing a UCC registration for Tonga. The European Business Register, with 24 members, gives a single place to find information on businesses from all over Europe, and there is an effort to form a similar service for the all the world’s business organizations.

Here in the U.S., people are beginning to look at better ways to share information between states. For example, instead of requiring certificates of existence for foreign authorizations, what if states simply went to the other state’s secure website and did an automatic look up? After all, certificates of existence are simply a 20th century way to access another state’s record. In the 21st century, each state has instant, direct access to information from around the world.

As you can see, business registration programs have been and remain committed to sharing the business information we collect with the public – including public agencies. That is the reason we exist, after all.

Tom Wrosch

Commercial Registry Program

State of Oregon Corporation Division

Acquiring a Software System: What Your Quality Assurance Program Should Be

Many organizations are in the processes of acquiring new major software systems, either to support new functions or replace aging systems. When acquiring significant software applications, organizations need to provide their own quality assurance program, even though the vendor is likely to have its own. Why is this program important and how should it be conducted?

Importance of Quality Assurance

In *Software Project Survival Guide*, software expert Steve McConnell writes:

Even if your software doesn't have to be ultra reliable, keeping defects under control matters because it affects development speed, development cost, and other project characteristics. ...Defects cost 50 to 200 times as much to correct if they are detected and corrected downstream instead of upstream. That should be enough reason to focus on quality, but other bottom-line impacts exist as well.

Poor quality is a major cause of project failure. An inability to detect and correct defects early results in a hidden backlog of rework that can prove a schedule buster. Defects in production software cost the economy billions of dollars in down-time and remediation.

Even though the vendor conducts quality assurance, the acquirer needs its own QA program for several reasons. First, QA is the eyes and ears on the project for the project manager, IT management, and senior management. When conducted properly, QA identifies “hot spots,” deliverables or processes where the level of defects is unusually high and need management attention and remediation. Second, most software acquisition projects have aspects that are the responsibility of the acquirer. Examples are writing of requirements, building interfaces between the new system and existing systems, and user acceptance testing. The acquirer needs to take responsibility for the quality of these aspects. Third, a good quality assurance program has a measure of independence from the developers. This independence allows the QA team to assess deliverables and report results to project stakeholders without pressures to avoid “bad news.”

The acquirer’s QA program need not, and should not, be adversarial with the vendor. A knowledgeable vendor will welcome such a program. Vendors have enormous incentives to have successful implementations. They will welcome efforts that improve the chance of success. The vendor’s QA department should work cooperatively with the client’s QA program, sharing test cases, techniques, and tools. Vendors also recognize that removing defects from requirements and other up-front deliverables saves substantial money and effort later in the project.

An Approach to Quality Assurance

Most application acquirers conduct user acceptance testing. However, the QA approach needs to be more comprehensive. It needs to include planning, test case analysis, inspections, manual and automated testing, and QA metrics.



QA Planning

Quality assurance planning needs to start when project planning starts. QA activities should represent approximately 25% to 50% of total project effort. Therefore, planning the resources for QA is a significant portion of the overall resource planning for the project. A mistake some organizations make is to fail to budget for quality assurance activities. This mistake makes it difficult to adequately staff the QA activities once the need is recognized.

Another mistake is to start planning QA late in the project. Some organizations feel that since testing starts after the system is coded, planning is only needed just before testing is scheduled. But, QA is more than just testing. Activities like inspections and test case writing need to start from the beginning of the project. Also, testing should occur throughout the project, not just at the end. This way, defects and “hot spots” are identified early in the project, when corrective action is most effective. Late planning allows insufficient time to write test cases, implement automated testing, and other important QA tasks.

Inspections

Inspections of deliverables have proven to be highly effective in reducing defects and should be part of any QA program. Requirements, specifications, and test cases are all good candidates for inspections. One reason that inspections are effective is because they detect defects early in the project when the cost of remediation is lower than late in the project.

Test Case Writing

Effective testing requires written test cases to help insure that testing covers requirements. The QA team needs a methodology for writing test cases. A good methodology is Framework for Integrated Testing (FIT), developed by Ward Cunningham. There are books and articles that teach the FIT methodology. There are open source software tools that support FIT. FIT test cases are expressed as a set of tables involving inputs and outputs. FIT test cases are written by business analysts or other business experts based on business requirements. Developers write code called fixtures to manipulate the system being tested. A FIT library is a code framework that controls the execution of the tests and provides reporting. FIT provides an easily learned methodology for preparing test cases that reduces the amount of effort required for this activity. The QA team can prepare test cases and commence testing faster with less effort than with traditional test case development.

Test Execution and Automated Testing

The testing approach should emphasize automated testing. With iterative development practices, like Extreme Programming, becoming more common, automated testing becomes increasingly important. Manual testing through the user interface becomes more expensive and less effective. Since code changes are more frequent than previously, regression testing has to be done more often. With manual testing, either regression testing is undercut or regression testing costs increase. Automated testing converts perishable manual effort into a reusable asset. Several open-source tools are available for automated testing, including testing through the user interface, testing through programming



interfaces, and load testing. Use of open-source tools reduces costs and eases introduction of these tools into the client organization.

Metrics

Providing the project team and senior management with quality metrics is an important contributor to project success. Timely metrics allow tracking progress in quality assurance activities and early identification of “hot” spots where quality is deficient and team corrective action is required. Test manager and defect tracking software help to provide quality information and metrics to all project stakeholders while reducing the effort in assembling metrics.

User Acceptance Testing

User acceptance testing is performed as a final confirmation that the system is acceptable. User acceptance testing should usually be performed by actual users of the system. This type of testing should focus on end-to-end functionality, ensuring that the system performs each business process in a way that is acceptable to the end users. User acceptance testing requires written test cases just as other testing does. In a well-run QA program, there should be no surprises in user acceptance testing.

However, exposing the user to the system should occur as early in the project as possible, not just at the end of the project. Some QA programs use conference room pilots to conduct testing with end users early in the project. In a conference room pilot, end users execute test cases with early versions of the system. The purpose is not to provide extensive test coverage, but rather to expose users to the system early in the project and to obtain their feedback.

Summary

Acquisition of major systems requires an effective quality assurance program. An effective program involves a number of activities, not just testing. Inspections and early testing have great leverage, because they detect problems early in the project when defects are the cheapest to fix. Any organization contemplating the acquisition of a major system needs to plan for the quality assurance program.

Dr. William Shaffer

President, Waysys LLC

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RECIPE

The following recipe was submitted by Terri Wilson. You will not regret trying it. It does her Grandmother proud!

Grandmother's Chicken & Rice

1 cup raw white rice
½ stick of butter
1 can water chestnuts – sliced; liquid reserved
1 can mushrooms – sliced; liquid reserved
1 can Campbell's French Onion soup
½ teaspoon salt
½ teaspoon curry powder (optional)
1 ½-2 cups chopped cooked chicken**
slivered almonds – toasted

Melt butter in large skillet; add rice; cook until brown. Add soup, liquid from mushrooms & chestnuts plus enough water to make a total of 2 ½ cups of liquid. Add water chestnuts, mushrooms, salt, curry powder, meat and almonds. Pour into a sprayed casserole; cover and bake at 350° for 1 hour. Stir and enjoy!

**Also good with leftover Thanksgiving turkey.

PUZZLE

Answer to last VirtuoSOS Puzzles

- 1) Using six straight lines of equal length and assuring that the lines do not cross each other, create 4 Triangles with all sides of all triangles being equal to each other.

Answer: This is easier to visualize if you use 6 toothpicks. Lay 3 toothpicks on a flat surface with only the ends touching to create a triangle. Now

stand the other 3 toothpicks up with one end of each toothpick touching a corner of the flat triangle and all the other ends coming to a point. Voila! Your solution!

- 2) A father and his son (the father being a famous emergency surgeon) are out for a drive one day. Unfortunately, a mishap occurs. The car goes off the road and the father is killed. The son, in critical condition, is taken to the nearest hospital. Upon looking at the boy, the emergency surgeon says, "I can't operate on this boy. He is my son." How is this possible?

Answer: The emergency surgeon is the boy's mother. (Shame on you if you thought only males can be surgeons!)

New VirtuoSOS Puzzles

These are fairly easy so you get several:

- 1) Mary's father has 4 children; three are named Nana, Nene, and Nini. So what is the 4th child's name?
- 2) What is half of $2 + 2$?
- 3) You are participating in a race. You overtake the second person. What position do you finish?
- 4) Why are manhole covers round and not square?

Hint: You may think the obvious answer is correct but it may not be.