MOBILE PRODUCTIVITY

Touch-Enabled Applications for the Lab of the Future

In Ultrabooks™ and Windows* 8 Professional, Ceiba Solutions sees opportunities to enhance productivity, security, and innovation for lab scientists

Ceiba Solutions offers next-generation informatics platforms and other solutions and services for healthcare and life science (LS) organizations. Many at Ceiba are former lab scientists and pharmaceutical researchers themselves, so they understand the roadblocks that slow scientists' productivity. With their latest products, they're using Intel® processor-based Ultrabook™ 2 in 1 devices, tablets, and other platforms based on the Intel® Core™ vPro™ processor and Windows* 8 Professional to minimize those obstacles. Ceiba has developed powerful, touch-enabled applications that empower its customers to work more efficiently, innovate more intuitively, and deliver breakthroughs that benefit patients and shareholders alike.

"We're all about creating the lab of the future and making a transformational difference for our customers," says Ceiba president Tom Arneman. "We've found that whether our customers are big or small organizations, public or private sector, bench scientists or facilities managers, they're all spending too much time doing things that IT can do for them in a more cost-effective and productive way. With our touch-based solutions, we're enabling them to get more value from their data, work more efficiently and effectively, and streamline the decision-making process around bringing new drugs to the marketplace."

Tom Arneman
President,
Ceiba Solutions

Simplifying the Science Workflow

Arneman and his colleagues recognized that Ultrabook devices and the user interface advances of Windows 8 offered significant opportunities for software developers to advance their solutions. Seizing the opportunities, Ceiba has touch-enabled two of its leading applications: Helium*, a self-service analytics tool that helps scientists identify, report, explore, and analyze connections across a wide variety of data sources; and Concierge*, a feature-rich portal solution for managing lab resources.

"Life science companies are knowledge-management organizations, and data is their lifeblood," Arneman says. "Many of our customers spend half their day managing data, both structured and unstructured—curating it, finding it, cutting and pasting and pooling it, trying to find answers to their questions. With Helium running on the Ultrabook devices, we provide a simple, touch-based tool that scientists can use in real time to interact with and visualize data from multiple sources from wherever they are. It's like a portable information workbench for lab scientists."

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"With Helium, for example, instead of large applications that need a lot of training and hand-holding and data warehouse expertise, we're using Windows 8 Professional and the performance and graphics of the Intel processor-based tablets to help our customers do science in a very visual and intuitive way. We're democratizing analytics and information access for scientists, and enabling them to get to the science very quickly. With the newest tablets and Ultrabooks, Intel is leading the charge and enabling us to deliver these solutions in a very elegant and quick way."

At a Glance

Project
- Use a new generation of mobile devices and operating systems to improve productivity for lab scientists

Accomplishments
- Created touch-enabled versions of the Ceiba Concierge lab management solution and Ceiba Helium self-service analytics

Lessons Learned
- Touch is a disruptive technology, especially when paired with mobile and social technologies. Touch adds power to big data analytics, speeding the time to insight.
- Enterprise-ready tablets, Ultrabooks, and 2 in 1 devices with touch-enabled applications increase portability and provide new ways to work. In pharmaceutical companies and other research-driven organizations, touch-enabled applications on Intel processor-based mobile devices can simplify workflows and enhance scientific creativity. Case in point: Using Concierge to track instrument data with live mobile updates of equipment status and usage.
- IT teams and application developers are proactively finding ways to apply these innovations within their organizations. "The advice I would give to anyone looking at using touch for enterprise applications is to go ahead and get started, and don't be afraid to experiment," Tom Arneman says. "Involve users in your development and test operations. Take advantage of the tools and support that's out there in the Intel and Windows ecosystem—there's a lot available, and it can really accelerate the work of developing and porting applications."

Similarly, Concierge helps scientists and lab staff manage lab equipment and experiments remotely. "There are robust solutions for facilities management teams, and some good solutions for IT," says Arneman. "Concierge improves productivity for scientists and managers who are in the lab on a daily basis, managing the equipment or running their experiments. These are the guys who end up writing their interim results on their latex glove because they don't have the right mobile tools. We're giving them the ability to access information about their instruments or experiments in real time no matter where they are. They can carry the device into the lab, and they can untether themselves from the lab but still know what's going on."

Exposing Data by Touch

Arneman was initially skeptical about the utility of touch. "My expectation was that it'd be easier to just use a mouse," he recalls. "However, I quickly saw that touch is faster and far more intuitive. Your mind somehow just understands where it's going, your finger moves to it, and you've immediately gotten to the data that you're looking for."

Arneman and his Ceiba colleagues say the combination of touch and mobility for data-intensive computing is transformative for their end users. "We built these applications with the idea of simplifying the way science is done and making it far more intuitive," says Robert Cooper, executive director of business development at Ceiba.

Mobile, touch-enabled access to diverse data sources can also spark creativity, according to Cooper. "When you're spending all this time trying to find information and copying and pasting and pulling it in from multiple sources, you tend to lose that intuitive serendipity that can happen when the relationships are exposed," he says. "If you're using Helium on an Intel processor-based tablet, you're working in one application with excellent performance and graphics. All the data is being exposed to you and you can visualize and explore the relationships. You're able to make better decisions and make better science and actually get to a solution or a product that much quicker. You don't lose that 'aha moment.'"

Ceiba is also innovating at the nexus of big data and social media. The company's newest product, iSwarm*, monitors and analyzes publicly available social media conversations to help organizations gain new insights into health issues and behaviors. iSwarm offers a new path to insights that can aid in tasks such as spotting an emerging epidemic or identifying a new treatment's unrecognized side effects.

Enterprise-Ready Tablets

Ceiba's leaders say devices with the Intel Core i5 vPro processor and Windows provide capabilities that enhance scientist productivity while helping IT departments manage the environment and safeguard valuable data.

Performance is a critical factor for Ceiba's end users. "Performance is king in these environments," says Arneman. "We're pooling data from multiple sources and putting it in front of the user. We find that the Intel Core i5 vPro processor really reduces any lag. Some of the applications our customers run are very heavy, and the Intel Core i5 vPro processor streamlines the startup for those applications as well. It delivers the data more effectively and runs the applications more smoothly."

Compatibility with the enterprise computing environment means that the Ceiba apps can operate natively within the Microsoft Office* environment, allowing end users to move smoothly between the Windows touch environment and traditional enterprise applications. That compatibility also enables enterprise users and IT departments to seamlessly integrate the Intel processor-based tablets and other devices into their computing environments, extending the use of applications, peripherals, and drivers.

"The flexibility we get in the Intel and Windows environment has really revolutionized Helium's value proposition for the scientists," Arneman explains. "It allows Helium to live within some of the loved user interfaces the scientists are familiar with, like Microsoft Excel*. They can work within the Windows 8 app, which is like a blank canvas for thinking through their data and understanding the relationships, and immediately transfer that information back into an Excel spreadsheet, which is where

they most typically live and interact. They get this fluid interaction of the Windows 8 app and the Microsoft Office interface, with Helium being the enabling layer that delivers the data or analytics into that environment. Users can also open e-mail attachments and use their electronic lab notebooks (ELNs) and other applications."

Managing and Securing the Enterprise

Arneman and Cooper say the Windows operating system and Intel Core vPro processor, honed over generations of enterprise deployment, allow them to deliver a more manageable, secure solution.

"Intel and Microsoft are delivering a solution that is enterprise-ready, much more so than solutions that have emerged strictly from the consumer space," Arneman says. "Our customers can roll these platforms into their environments and manage them with the same tools and skill sets they've already invested in. They can run the key enterprise applications without having to write custom apps. It's a far more robust solution for the enterprise."

Ceiba's decision to develop for the Intel and Microsoft environment also enhances security for its customers. "A single innovation in the pharmaceutical and LS industry can mean multiple billions of dollars in revenue, so security is a huge concern," says Cooper. "The Intel technologies help us give our customers a level of confidence that they can use and share their data in a secure way."

USD 9 Million in Annual Productivity Savings

Ceiba's solutions can produce benefits with a bottom-line impact to pharmaceutical companies and other LS innovators. For example, Helium lets scientists do in just a few minutes the type of data browsing and analysis that used to take hours or days or require a data warehouse specialist to help with. "Third-party analysis with one of our customers found that Helium's productivity benefits could save the customer USD 9 million annually," Arneman says. "That's the equivalent of more than 50 scientists per year! That figure doesn't count things like being able to retire older applications and reduce training costs. It also doesn't include the value of any breakthrough innovations the company's scientists might make using the application."

As a self-service analytics platform, Helium also frees time for IT. "Previously, scientists might have asked for a new application with the data or a new data warehouse— these really large, cost-intensive, long-term projects," Arneman comments. "With Helium, they're just asking IT for a new function— can you add this new type of data into my mix? Can you give me this new way of thinking about my problem? We're shifting

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IT from an application-implementation role to a data-enabling role, with Helium as the front end. We're making it possible by using the power of that Intel processor-based tablet, the performance matrix around taking advantage of that back-end infrastructure and delivering that in real time to the scientist."

Concierge, too, can have a clear financial impact. "Some lab equipment is so expensive, it costs hundreds of thousands of dollars to run a single experiment,"

Arneman says. "If the experiment is failing or there's a problem with related data, you can come to work in the morning and find out you've wasted hundreds of thousands of dollars. You may have also delayed the discovery process, and delayed a life-saving cure or treatment getting to the patient."

Both Helium and Concierge give Ceiba and its customers a foundation for further innovation. "The concepts around managing data by touch are really revolutionary," Arneman says. "I don't think people have

completely understood the power of touch related to data. As a scientist, the ability to go, with just a few taps or clicks, from a compound identification in a local repository out to a related chemical in a public domain database, then pop back inside and pull down some analytics that my neighbor has developed that I never knew about—all from this lightweight device—just makes it that much easier for the ideas to flow and for the process to be so much more intuitive."

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