

## Timothy Wahlers, President and CEO of Vidiom Systems



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Timothy Wahlers is president and CEO of OCAP specialist, Vidiom Systems. The company--which among other things designed and developed an OCAP stack for OCAP Development, LLC, the joint venture between Comcast Cable and Time Warner Cable, and which is also licensed to distribute that software--was recently acquired by ADB Holdings, the parent company of set-top box manufacturer, ADB, and MHP specialist, Osmosys. Wahlers recently spoke to [itvt]'s Tracy Swedlow about the ADB acquisition, about the current status of OCAP in the US, about Vidiom's strategic move into product development, and more.

[itvt]: Could you give us a brief overview of what Vidiom does?

**Wahlers:** Vidiom provides software products and services in the interactive TV space. We are best known for the role we have played in support of the cable industry in the creation and development of the OCAP specification and the development of an OCAP implementation for Time Warner and Comcast. We are also making a name for ourselves in headend ware, testing, interactive content

development, and deployment.

[itvt]: Will this be the year of OCAP?

**Wahlers:** I think so. I think it needs to be. A lot has been invested. The effort to define OCAP started in 2000/2001, and a lot of work's gone into it in the five years since then. I think all the stars are aligned, and there's enough force behind it--hopefully, there's now enough commitment from all those who needed to get committed to it in order to make it happen.

From my vantage point, I definitely think we're in good shape to see deployments this year. It's certainly where Vidiom's going to focus its efforts and time, and where we think we can make revenue and ensure our long-term success.

I think anybody who's interested in content on cable has to hope that OCAP is successful. It's just too difficult to deploy new applications and services across all the different cable systems, without a standard environment--where you do it once and you've basically done it everywhere. This year, we'll certainly learn the hard lessons of what it takes for the cable operators to support and manage OCAP systems in the field. So, if not the year of OCAP, it will certainly be a crucial year for the viability of OCAP. It is time to put up.

[itvt]: Why do you think it's taken so long for OCAP to get to the deployment stage?

**Wahlers:** Many hurdles needed to be cleared. This is a very complex undertaking. People focus mostly on the software issues, but the hardware, legal, intellectual property, and political issues, as well as entrenched vendor resistance--and ultimately the extra cost--all need to be faced and resolved. OCAP is a paradigm-shift for cable. The cable operators have added responsibility in the development, deployment, and support of software in the age of OCAP. They need to build or buy electronic program guides, PVR, VOD, monitor applications, and the necessary network support infrastructure. Time Warner and Comcast have announced significant efforts to do just this and Vidiom is helping. We hope to apply the experience gained to assist the other cable operators as well. We will be active in the test and deployment of OCAP.

[itvt]: You were recently purchased by ADB. Could you talk a little bit about Vidiom's role in that company?



**Wahlers:** To avoid any confusion, I should stress that we are actually owned by ADB Holdings, which, obviously, is a holding company: it also owns ADB, the hardware/set-top box company; Osmosys, a software company that had European operations and US operations; SIMPLE, a digital content aggregator and supplier in Italy; and Tele.Dom an ITV service provider in Poland. The US operations of Osmosys have now been folded into Vidiom. So Osmosys is focusing on MHP in Europe, and Vidiom will continue to focus on OCAP middleware and OCAP content and applications, integration and testing in North America.

And that was one of the great things about the acquisition: ADB Holdings wants us to continue to do what we're doing. They want us to continue to provide services to the cable operators, software vendors, and hardware vendors--even those that compete with the ADB set-top company. ADB has shown its commitment to open standards as the leading vendor of MHP solutions in Europe. I think they have a similar worldview to Vidiom: they know that the infrastructure--OCAP, in this case--needs to exist, before set-top vendors and interactive content and applications companies can make money.

Vidiom has been a profitable business all 10 years of its existence. This attracted ADB to Vidiom, of course, and they've financially incentivized the staff to maintain the course. I and all the 100-plus employees will remain; not one person was let go because of the purchase. Vidiom has a lot of customers in the hardware and set-top spaces who are competitors to ADB, their hardware/set-top company. ADB Holdings recognizes that they can't control and limit our future--they realize that that would be bad not only for us, but for them as a holding company and even ultimately bad for ADB the set-top company. Vidiom's mission remains the same: we provide software solutions and services to the ITV space.

So we're actually completely independent of the hardware company. There is no direct tie between the two companies. I think that will work to Vidiom's benefit: maintaining our independence will allow us to retain all of our customers. I'm working hard to communicate to the industry the fact that we will maintain our independence as part of ADB Holdings. Because, certainly, when the announcement of the acquisition was made, I think some of our hardware customers, who compete with the ADB hardware company in whatever markets, were concerned about that relationship.

Vidiom has always had to work with multiple companies that compete with one another--cable operators, set-top vendors, consumer-electronics companies, telcos, software companies, or whatever. We've always taken great pride in protecting all our various partners' information and plans. We have to do that, or we would lose those customers.

**[itvt]:** Do you think Vidiom's acquisition by ADB Holdings will allow you to expand internationally?

**Wahlers:** That is a possibility. Certainly, MHP and OCAP, as you know, are built out of the same cloth. OCAP is a superset, in many ways, of MHP. Many of our hardware manufacturers want a single source or single solution for both. So we'll now be able to offer that. We can now offer any of the Osmosys technologies to our customers. If the customer is interested in the Osmosys OCAP stack, we can provide that and we can service that as well.

There are actually a lot of synergies around this acquisition: Osmosys did not have a service capability in the US, and now they do through Vidiom. We can support and manage their stack, and we can work with the software engineers in Europe who developed it. There are strengths to that technology that might appeal to some of our customers, just as there are strengths to the Vidiom stack that we've been building for OCAP Development, LLC--the joint venture between Time Warner and Comcast--that might appeal to Osmosys' customers. We will support whatever the customer wants, and deliver whatever they need.

**[itvt]:** Now that the OCAP spec is fairly settled, and appears to be about to see its first US deployments this year, will you now be focusing on OCAP application development and on providing tools for developing OCAP apps?

**Wahlers:** Well, on the product front, we have a tool called VISION Workbench. It's a Java-OCAP application developer tool. It could also build MHP apps, and we've used it for other technologies, as well. We've actually sold over a hundred copies of the OCAP version of Workbench. We participated with the cable industry and Sun in an OCAP



application contest last year, providing Workbench free to contestants to develop applications, and we're going to continue to do those types of things. Participating in those contests opened up a number of opportunities on the applications front.

We have developed some of our own applications, and today our major focus is on assisting others in their development of applications. We've been working--sometimes as developers under contract, sometimes as architects--on many of the guides, the resident-application suites that the cable operators are developing. So we've been supporting them in the development of their own software.

We've developed a monitor app for Cox, a piece of OCAP technology that allows the management of the software in the box. We're working with the cable operators on software for the headend that's going to manage software delivery over the network, to the set-top--it will manage versioning, security, updating, and quality-of-service kinds of issues.

So you could say that we've approached this space from the ground up, as it were. We have a lot of history working on OS's and drivers. Then we've been working, of course, on the stack for the last three years, and then on the cable-operator application suite that is going to sit in the box.

All of those things need to exist and need to be robust. They need to be maintainable. They need to be supported in the field. So we are trying both to deliver the technology and provide the necessary integration, testing, and deployment services to the cable industry and to any of the other vendors supplying parts of the food chain. Once the food chain is healthy, then I think content will take off. We've been less focused on building a silo of technology for the deployment of a few specific or specialized apps, and more focused on, "How do we enable any and all applications in an environment that finally will make application-distribution easy, or at least doable?"

And yes, applications are very exciting. We've brought onboard an industry veteran, David McElhatten, as our VP of business development focused on content and interactive applications. Our applications pedigree at Vidiom should not be understated. Our staff has produced over 200 products in a variety of interactive formats, many of them key licensed or franchise products that have been released into the consumer marketplace. Recently, and more specific to OCAP, we have produced a number of very compelling prototypes in the VISION Workbench development environment for a large number of key players in the programming and deployment space whose names include some of the largest mobile operators, national programmers and broadcasters, and leaders in music and sports programming.

What's intriguing about the applications business is that it's not just about developing a great product and UI on a set-top box. It takes frontend authoring, product management systems for ongoing updating and it takes backend testing, hosting, and delivery. Essentially, this is the OCAP applications ecosystem. This is an area where we believe we're going to excel, since we understand how to maximize our use of the middleware and possible delivery systems, probably better than anyone else in this space.

We're also spending a lot of time, now that we're owned by ADB Holdings, looking at the overall software and application mix in Europe, and finding ways that we might be able to bring ADB-owned technology over to the US and in turn bring Vidiom technology from the US over to Europe.

[itvt]: You mentioned earlier that your primary focus is on working with Time Warner and Comcast...

**Wahlers:** We intend to stay committed to and support the middleware and the base platform needs of cable in general. Certainly, Time Warner, Comcast, and the other major cable operators are leading the way, but the smaller cable operators have an important role to play as well.



So part of our strategy is to do what we can to assist and be of value to Time Warner and Comcast--but also, to reapply that experience, and make it available to the other cable operators. That's a role that Motorola and Scientific-Atlanta performed in the past, and I think it's certainly a role that Vidiom's going to play in the OCAP market.

We're also very interested and capable in the deployment side of things, and in working with the divisions. We've had a number of opportunities to work with Time Warner on deployments, and we now look forward to expanding our service capability for all of the cable operators in the test, deployment, and integration areas.

[itvt]: Could you describe in more detail the work you've been doing with OCAP Development, LLC?

**Wahlers:** Vidiom is building an OCAP implementation for ODL. Time Warner and Comcast are supplying this implementation to their leased box suppliers. Vidiom is supporting these vendors in their ports of the OCAP stack to their hardware. We are also supporting the deployment process in the field. We have also licensed this OCAP implementation for sale, and this business is gaining momentum for us.

[itvt]: Do you think it was a good idea to base OCAP on Java?

**Wahlers:** There is no perfect technology choice, but all things considered, Java is the best available. I think people get too focused on the technology choices themselves. Java, as you say, is what OCAP is all about. Java is a programming language available in browsers and used extensively for mobile applications. Some question the choice of Java and look to descriptive languages based on XML or HTML as a better choice to replace or augment Java. Until we get OCAP deployed I, personally, would discourage addition of XML or other extensions. As they say, keep it simple.

[itvt]: How large is Vidiom today?

**Wahlers:** We're up to about 105 employees, now. We've grown a lot in the last couple of years. We've been fortunate. So many software companies in this space have struggled and disappeared. We've picked up, in many instances, the cream-of-the-crop from a lot of now-defunct companies. I won't mention names, but I think we have engineers, software people, tech writers and testers from many--if not all--of the big names that have preceded us. With that great wealth of talent, it's my job to try to put it to good use, and to make people aware of us.

[itvt]: What are you planning to do to make people more aware of Vidiom as a company?

**Wahlers:** Well, for the past few months, I personally haven't been doing that much evangelism, because I've been so closely involved in this acquisition by ADB, wondering, "Is it right for us? Will they allow us to be who we are and to continue to do what we do best?" and of course I believe the answer to that question is yes. Additionally, I've been wading through all the legal and financial work a deal like this entails. So, I feel like I'm just coming up for air again, after all that. At the same time, our focus on Time Warner and Comcast generally keeps us very busy.

However, now that the acquisition has closed, I'm going to be out and about a lot more. I hope people will see a lot more of Vidiom, and that we'll be able to better show the variety of talents and capabilities that we have. At the upcoming NCTA National Show, for example, we're going to focus very hard on driving home the message that we're not just a services company. We'll be pushing the fact that we offer developer tools, such as VISION Workbench, that we offer our OCAP Application Developer Program, and that we've developed an automated testing environment--an ATE--that's targeted at cable. vCERT is our name for it.

[itvt]: Could you tell us a little more about vCERT?



**Wahlers:** Sure. vCERT is an automated test system designed around CableLabs' certification tests and delivery system. That's a mouthful, but essentially vCERT delivers tests to set-tops to qualify the middleware. It runs all of CableLabs' certification tests and will run JUnit tests and other xlets to expand on CableLabs' test coverage.

Vidiom has enhanced the CableLabs environment by adding a GUI front end that allows the operator to select individual tests to run or define sets of tests to run. We have added a database for test results and we are adding an image comparison system to automate the testing of GUI's. This would allow us to test applications and middleware with the same system.

We are releasing the 1.0 version of vCERT in April and showcasing it at NCTA. We are really excited about it because, while you have pointed out the move to applications, there is also an equal move to testing. With deployment comes increased testing of boxes, applications, and end-to-end systems. Automated tools are critical for all of this. vCERT is one tool that Vidiom feels will meet the cable industry's needs for pre-certification, intensive network qualification testing, and soon application testing.

**[itvt]:** I understand that you're also offering testing facilities on your premises, correct?

**Wahlers:** Yes. We are in the process of building out the facilities. We're trying to provide a lab space facility at Vidiom for consumer electronics manufacturers to come and test their set-top hardware, using a range of test software that we've written and various applications that we're working on convincing application development companies to make available to us. We're hoping that people will look to Vidiom as the place they can come to test things. Of course, we want to do this as an adjunct to--not in any way as a competitor to--CableLabs. Their role is to certify platforms, and we do not offer certification services. But CableLabs can't handle everybody coming for testing, and they don't want to be a constriction point through which everything has to flow. So what we'll be doing is providing people with opportunities to test their software at our facility, in advance of actual certification testing and after certification but prior to deployment. And, at the same time, we'll provide vCERT, this automated test environment, as a product set that allows hardware manufacturers to conduct tests in their own facilities.

**[itvt]:** Are you offering testing services solely to hardware providers?

**Wahlers:** No, we also want to provide the same services to application developers, too. Not only testing applications, but assisting developers in writing them. This is part of the Application Developers Program we are announcing. So, with a fairly limited budget--though maybe that budget will get bigger--we're assembling a range of software and hardware in our facilities that will support these testing services.

We have a very strong interest in the testing and the supporting of applications and software. To me, the fact that we're talking about testing and supporting applications is a sign that the industry is getting where it needs to be. When you're talking about how you'll support applications in the field, versus how you write them or how you can even get a budget to write applications, that's a good sign. By the way, supporting boxes in the field and software and set-top and cable operators is a role that we're very interested in, and that we're pushing ourselves into.

**[itvt]:** Could you talk a little more about the support services you offer and about why you consider them important to your business model?

**Wahlers:** Vidiom has always held that software is just one part of a group of services that our client needs. Industry expertise in the form of consulting, project management, documentation, training, testing, and support round out the services provided with or without software. Interestingly enough, the first few years of Vidiom were more documentation and consulting oriented than software development. What we have found over the years is that our clients appreciate our attention to detail in delivering the full array of services. We document, test, and support our software at an extremely high level. We also design custom courses to train our clients on industry standards, testing



methodologies, Java, OCAP, etc. Clients often come to us for software and discover that they can also obtain quality documentation, testing, and training.

Our Engineering and our Services departments are about equal in size. Because we have hired the cream of the crop, not only do we provide service specialists, we provide the quality and industry expertise in these areas that really set us apart. All of this enhances the Vidiom business model by giving us more chances to be successful and by distinguishing us from other service vendors in this space.

**[itvt]:** What advice would you give to manufacturers of set-top boxes and other equipment, and to application developers, about what they need to know about OCAP?

**Wahlers:** Well, let's start with application developers. First of all, they should have their eyes open about the stage at which we find ourselves today: there are no systems today where applications can be readily tested and deployed. So if their business model requires revenues this year, they're unlikely to generate those revenues through the

development of OCAP apps. They should definitely have their eyes open about the complexity of the software and about how long it's going to take to implement all this.

However, that's not to say that the commitment from the cable industry to OCAP isn't ultimately there. I know that, in the past, there has been concern that there wasn't enough commitment from cable to make OCAP happen. But at CES in Las Vegas last January, I think the larger operators--Time Warner, Comcast, Bright House, Cablevision, Charter, Cox--demonstrated their commitment by announcing multiple deployments this year. They've revealed deployment schedules, and they've named the locations where they are going to deploy this year. So I definitely think the commitment is there.

As for device manufacturers, my advice is to get ready: OCAP is almost upon us. Deployments are happening this year. The commitment from the MSO's is there. As is their interest in working with CE vendors. Even though Samsung has the only device that has passed OCAP certification, there are many companies developing OCAP devices today. By the time they are ready for certification, OCAP will be in the deployment stage.

**[itvt]:** Anthony Smith-Chaigneau and Paul Bristow, who are employees of your sister company, Osmosys, and who are both fairly prominent in the MHP world, recently published an open letter in our newsletter, in which they argued that Via Licensing's latest proposal on MHP Patent Pool licensing fees threatens the future of MHP. What is your take on that situation? I take it that none of the issues they're concerned about impact OCAP in any way.

**Wahlers:** The patent pool issues are different with OCAP. The concern that Anthony and Paul expressed deals with the terrestrial broadcast fees, which is not an issue with US cable and OCAP. To my knowledge, there has been no challenge by any box vendor or cable operator to the initial proposal for OCAP, but there was a challenge to MHP licensing from the beginning. Some of the cable operators are members of the OCAP Patent Pool, so they had opportunity to influence the fee structure for OCAP. Of course, intellectual property issues have held back progress in interactive TV for years. Hopefully the MHP intellectual property situation can be rectified as soon as possible.

**[itvt]:** Do you see telco TV as a threat to the cable industry? How will its emergence affect Vidiom, if at all?

**Wahlers:** Any time another player provides similar services, then they can be looked on as potential competition. Both the telcos and cable are providing what was the other's primary revenue service. We see cable providing telephony services and the telcos starting to provide video services, while both provide high speed data. At the same time, we see wireless providers in deals with cable companies to bundle video, telephony, data, and wireless. As markets and competition grow, there will be more opportunities for services companies like Vidiom. Telcos and IPTV have been a long time coming. It will become harder and harder to distinguish a telco from an MSO in the years to come.



**[itvt]:** How long do you think it will be before the cable companies switch to an all-IP infrastructure? How will that impact Vidiom--in light of the fact that you are closely associated in most people's minds with OCAP?

**Wahlers:** Cable, with DOCSIS and DSG, will embrace a hybrid of MPEG transport and IPTV, with more of the latter as things like on-demand content become prevalent. I suspect not as quickly as some predict. As for the second question, OCAP is not dependent on the network technology. It is just as relevant for IP-based systems. A standard called GEM, Globally Executable MHP, which is the core of OCAP and MHP, is being considered as the core for the IPTV standard as well.

**[itvt]:** You've mentioned that Vidiom is expanding from being a provider of services into a provider of products. Why has the company decided to make this strategic shift?

**Wahlers:** Vidiom is not shifting from services to products. I expect we will always provide services. However, Vidiom is starting to provide products and is looking at expanding. I see this as a sign of health for OCAP in general. Vidiom has been waiting for the proper moment in time for OCAP maturity to allow a products company to be successful. For OCAP, and ITV in general, to be successful, niche products and generic products must be available. We have seen this in prior new media markets, such as CD-I, Video CD, CD-ROM, etc. These needed products range from authoring

tools, testing tools, application templates, and application delivery systems, to end-to-end content vendor solutions. Services are good work, but have odd cycles based around budgeting and industry push. Products are more constant, but require up-front funding. Vidiom has funded its product development of VISION Workbench, vCERT, and training courses from its services. The revenues from these products are rolled back into product development and maintenance. Vidiom is looking forward to expanding the product offerings as we are able to support the basic development.

**[itvt]:** And, to summarize, your four key products are...

**Wahlers:** Currently, Vidiom is offering four major products: VISION Workbench, vCERT, Training, and our OCAP Porting Kits. New products will be targeted at industry needs. We look at the OCAP ecosystem and attempt to fill the gaps and integrate our technology with other vendors to create an end-to-end solution.

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