



NEC Set to Expand Market for Ads, Content on Public Screens; Rapid Payback Expected

Overview

Country or Region: United States
Industry: Manufacturing—High tech

Customer Profile

Headquartered in Itasca, Illinois, NEC Display Solutions of America provides innovative desktop LCD monitors, commercial-grade and professional-grade large-screen LCD displays, multimedia and digital cinema projectors, and integrated display solutions.

Business Situation

NEC wanted to enter the market for digital place-based advertising with a solution to benefit advertisers and network owners and increase its own revenues.

Solution

The NEC solution gives network owners reach into the national market and gives advertisers the timely data that they need to boost campaign effectiveness.

Benefits

- Expected to boost revenues, expand the market
- Expected to deliver the fastest payback in company history
- Accelerates processes, increases effectiveness
- Provides daily proof-of-play reports

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Pierre Richer, President and Chief Operating Officer, NEC Display Solutions of America

NEC did not just want to enter the market for digital place-based advertising—the advertising that appears on screens in malls, airports, and other venues. It wanted to expand that market by changing how advertisers and network operators do business. To do that, NEC is about to launch a pair of Web-based applications that largely automate the manual processes that make up the traditional ad campaign. These include identifying potential ad networks, negotiating placement, managing the final product, and reporting on ad play. To create a fully functional, robust solution quickly and cost effectively, NEC turned to Microsoft technologies and Project Leadership Associates, a Microsoft Gold Certified Partner. NEC expects its digital solution to increase both the effectiveness of ad campaigns and the revenues of the networks hosting them—and to deliver the fastest payback in NEC history.



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Situation

Nowadays, even people who do not watch television watch television. It is hard not to when video display screens are increasingly present in airports, banks, universities, fast-food restaurants—even the checkout line at the corner grocery. But, for the most part, these display screens are not used to show traditional television programming. Instead, they stream news and local weather, offer information about the venues in which they are located, or provide instructions in the event of an emergency.

And, increasingly, these screens are being used to display advertising, which is referred to in the industry as “digital place-based advertising.”

The Traditional Process

The screens themselves may offer the latest technology, but the tools used to load the display content generally do not. That process can begin with advertisers or their agencies calling hundreds of venues or networks to gather the information they need to make placement decisions. The information they require includes not only availability and rates, but also details about the venue, the amount of foot traffic around the screens, the demographics of viewers, whether the viewing data is independently audited for accuracy, and so on.

The IT department at each venue (or the store manager or other administrator, if the venue is not large enough to support an IT department) generally has to load the digital advertising content to the content management system that feeds the screens. Once the ads have run, the venue must prepare and send a “proof-of-play” report to inform advertisers exactly where and when their ads ran. That report often takes up to two weeks to arrive.

Given the labor-intensive nature of that process, it may not be surprising that digital place-based advertising accounts for just 1 percent of total advertising expenditures in the United States. What may be surprising, however, is that during the difficult economic climate of the “Great Recession,” it has been one of only two advertising media—the Internet is the other—that has jumped in revenue.

An Evolution for NEC

Meanwhile, NEC Display Solutions of America, which manufactures the displays used in many of these venues, decided to reevaluate its business model. The traditional display-screen market had low revenue growth because, even though unit sales were rising, profit margins were declining. The company addressed that trend by evolving from a display provider to a full system integrator, offering PCs, cables, mice, content management software, and consulting and installation services along with the screens.

“The move from selling just displays and other hardware to offering system integration services helped to drive revenue, but modestly,” says Pierre Richer, President and Chief Operating Officer for NEC Display Solutions of America. “If we wanted larger revenue growth—and we did—we knew we would have to look elsewhere.”

The digital place-based advertising market seemed a perfect extension of the company’s business. NEC sales personnel were already talking to customers about buying display solutions. Running advertisements on those displays to generate additional income was a natural next step.

Although this new digital place-based market was small by general advertising

standards, it was large compared to the market for display solutions. Equally promising, there were no real competitors offering the end-to-end service for networks and advertisers that NEC executives envisioned. The aggregators that did exist worked mainly with advertisers, not networks, and used the traditional manual process to receive, book, and distribute ads.

Solution

NEC considered the requirements for an end-to-end service that started with an advertiser identifying which venues and networks to approach, and ended with the playing of the advertiser's content on a venue's display screens. In NEC's newly defined business model, the service would have to be highly reliable to keep advertisers and networks engaged. It would also have to be extremely scalable in order to support the growing ranks of advertisers and networks that are sure to evolve in this market segment.

Development of this end-to-end place-based advertising product would have to be fast and easy so that NEC could quickly launch a full-featured, robust service that discouraged potential competition. And because network operators would continue to run content from sources in addition to NEC, the service had to coexist with those other sources, by running its own content as scheduled and turning control of the displays to other sources as programmed by the networks.

In addition, the service would have to work with the hardware and software that advertisers and networks already use. It would need a visual, intuitive user interface. And to be cost effective for network operators, it would have to be highly automated and work without the intervention of the IT department.

Introducing Vukunet

NEC has met those requirements, and more, in an Internet-based application called Vukunet, and a companion solution called Advuku. Each has its own Web site. Network operators register on the Vukunet Web site. After registering, they download and install a player application on the PCs connected to their displays. This application retrieves information about the PCs and the displays connected to them (for example, screen size and orientation, audio capability, and display model) and automatically uploads the information to the Web site through a Web service.

Networks can then enter information about their venues, including location, number of displays, audience demographics, foot traffic, auditing status, and industry designation (such as healthcare or banking). Network operators also decide when they are willing to have ads run on their systems; Vukunet provides a range of scheduling options.

Meanwhile, advertisers or their agencies go to the Advuku Web site to identify potential venues on which to run their content. They can filter search results by any of the categories of information provided by the network operators. The results are displayed as pinpoints on a map so that advertisers can easily see the potential geographic coverage of their advertising. They can click any of the pins to get detailed information about a particular network.

When advertisers have located networks on which they would like to run ads, they can contact network operators and make offers for time on the operators' screens. Operators can accept or decline the offers or continue negotiations, all through the Web site. Operators can also use the solution to preview advertising from

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advertisers they do not know in order to confirm that content meets their standards. In addition, operators can easily set the application to automatically approve content from advertisers they know and trust.

When an advertiser and a network reach an agreement, the content and schedule are automatically downloaded to the display screens, and the ads are played during times that the network operators have set aside for advertising.

After ads have run, Vukunet automatically uploads proof-of-play reports from the networks and provides the information through Advuku to advertisers daily. Advertisers can access that information, plus monitor budgets, demographics, campaign geography, numbers of impressions, and more, through a dashboard when they log on to Advuku. Network operators, meanwhile, can access a similar dashboard in Vukunet that shows them the status of ads on their network.

The solution includes a content management system that network operators can use to manage any content they want to show on their displays. Additionally, because the solution works with any standard content management system, operators can continue to use a system that they already have in place. The application also includes a software media player to play content on each screen. The player installs itself on the PCs that control the displays and updates itself automatically as needed.

Choosing an End-to-End Platform

To create Vukunet, NEC decided to use Microsoft technologies from the back-end database through to the user interface. “We chose Microsoft because we felt it was a mature, reliable software platform for our

mission-critical applications,” says Michael Zmuda, Director of Business Development for NEC Display Solutions of America. “Third-party resources for the Microsoft platform are readily available at every stage, from development to support. And by building an end-to-end solution based on Microsoft technologies, we didn’t have to struggle to make products from different vendors interoperate.”

As part of this approach, NEC chose Microsoft SQL Server 2008 R2 Enterprise data management software for the back-end database. And the analysis and reporting capabilities are based on SQL Server 2008 Analysis Services and SQL Server 2008 Reporting Services. “With SQL Server, we felt we could get the throughput we needed to serve advertisers and networks with information in real time and the reliability to help ensure that the information in our mission-critical applications would always be available,” says Mike Corcoran, Director of IT for NEC Display Solutions of America. “SQL Server provided the optimal solution for Vukunet and Advuku in terms of features, performance, development, and support.”

On the user interface side, the Web site is built in Microsoft ASP.NET on the Microsoft .NET Framework 3.5. The Microsoft Silverlight 3 browser plug-in is used to run preview video, while Bing maps and Asynchronous JavaScript and XML (AJAX) controls display search results. They are both consumed as a Web service based on the Windows Communication Foundation programming model and provide mapping functionality in the online application. NEC also used the Microsoft ADO.NET Entity Framework in the data access layer.

The media player is built on Windows Presentation Foundation and the Microsoft

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.NET Framework 3.5. Vukunet server-to-server communication is buffered by Microsoft Message Queuing technology in the Windows Server 2008 R2 operating system.

Gaining a Partner

NEC needed to choose an external solution provider to contribute development services for Vukunet, so it turned to Project Leadership Associates (PLA), a Microsoft Gold Certified Partner.

“We chose Project Leadership because of its expertise on the Microsoft platform,” says Corcoran. “We felt we were pushing the boundaries of what the Web can do, and so we wanted a provider with both the knowledge and a strong relationship with Microsoft so that any development issues could be resolved quickly. Project Leadership really came through for us.”

The PLA team managed the project from start to finish and provided the technical leadership on the application. The PLA team worked with NEC resources as well as other third-party firms to design the Vukunet and Advuku Web applications, the Vukunet and content management system player, and their integration with multiple third-party Web services. Using a combination of onshore and offshore development resources, the team developed and deployed the application quickly.

“This was one of the most exciting custom application projects in our company’s history,” says Gaurav Issar, Executive Vice President of Software Development at Project Leadership Associates. “We had to understand NEC’s vision and translate it into a custom Web application that was easy to use, scalable, and ahead of anything in the market. We had to design and build this application at a very fast

pace, which required following a very rigorous Agile development methodology. We were able to do this successfully using the entire Microsoft Visual Studio Team System development system. This helped our team develop code, conduct unit and system testing, and create automatic builds of the code for the testing and production environments in a rapid manner.”

Benefits

NEC expects that Vukunet will reduce costs and boost effectiveness for network operators and for advertisers and agencies. As a result, the company anticipates capturing a significant share of an expanding market, raising both its revenues and profits.

Expected to Boost Revenues, Expand the Market

NEC entered the digital place-based advertising market to boost the revenues and margins of its display solutions business unit. Without disclosing details about NEC’s business plans, Richer confirms that the Microsoft-based solution enables the company to do just that.

“We expect to penetrate a market that is 10 times the size of our display solutions market,” he says. “Moreover, because this segment of the advertising industry has been held back by manual processes for so long, we expect that the automation and real-time data delivery that we introduce will actually expand the market by as much as 500 percent.”

Expected to Deliver the Fastest Payback in Company History

Richer says that NEC sees the service-based solution as going beyond increasing revenues and delivering higher margins than the company’s traditional hardware business. As a result, NEC expects the solution to pay for itself in just under two

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years, a bold target for the company and its industry. “We expect a much faster payback on Vukunet than is typical for NEC,” says Richer. “NEC has a very aggressive target for its return on investment in this revolutionary Web-based tool. It is the convergence of technology and business opportunity that is making it possible.”

The company’s success in the digital place-based advertising market, and its expansion of that market, will also spur an increase in the company’s display solutions business. “Growth in this market means that more screens will be needed to display more content, generating more revenue and profits for network owners,” says Richer. “It’s a win-win for NEC and our customers.”

Accelerates Processes, Increases Effectiveness

NEC has high expectations for Vukunet in part because of the significant benefits that the solution brings to advertisers. For example, it will greatly accelerate the process of identifying potential venues for specific clients and their campaigns. What was once a process of manual research and scores of phone calls, taking days or weeks to complete, will now be accomplished in minutes.

As a result, agencies can reduce their costs while delivering faster service to their clients. That service will be faster and more effective; for example, agencies or advertisers will now be able to choose not only specific venues for their content, but also the specific displays within those venues on which their content will run.

Network operators will gain similar benefits. They will now extend their reach to the national advertising market without having to expand their sales staffs, and do so with inventory information that is more up-to-date than previously possible. They

will maintain complete control over what plays on their screens and when—while eliminating the need to have IT personnel download that content or install and maintain media players for it.

Provides Daily Proof-of-Play Reports

Among the most significant benefits to advertisers and agencies will be the daily proof-of-play information. Proof-of-play information is uploaded to Vukunet in logs taken directly from the PCs that manage the displays, and is then accessed through the advertisers’ dashboards on Advuku. Advertisers can use the information to confirm that they are being charged only when their content runs properly. Logs are encrypted on the players to ensure that networks cannot provide misleading data. That information, combined with the dashboard information that monitors impressions, budgets, demographics, and campaign geography, allows advertisers to do even more.

Explains Richer, “For the first time, advertisers in this space will have the information they need when they need it to make better business decisions. By knowing exactly what content has played where, what impressions it has generated, and at what cost, advertisers can adjust their campaigns to maximize their results. Until now, they generally received this information too late to act on it.”

For More Information

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For more information about Project Leadership Associates, call (312) 441-0077 or visit the Web site at:

www.projectleadership.net

For more information about NEC Display Solutions products and services, call (866) NEC-MORE or visit the Web site at:

www.necdisplay.com

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 - Microsoft Visual Studio Team System
- Technologies
 - Bing Maps
 - Microsoft Message Queuing 4.0
 - Microsoft .NET Framework 3.5
 - Microsoft Silverlight 3
- Microsoft SQL Server 2008 Analysis Services
- Microsoft SQL Server 2008 Reporting Services
- Windows Communication Foundation
- Windows Presentation Foundation

Partners

- Project Leadership Associates