

VUKUNET's Back Story

NEC Display Solutions' VUKUNET ad-serving platform represents a two-year, multi-million dollar effort to help speed the maturing of the digital out of home marketplace and make many more digital signage networks viable and successful.

The completely Web-based platform introduces what is the first universal ad scheduling, playback and reporting engine to an industry that has had almost no interoperability or standardization across literally hundreds of solutions providers and operating networks, by necessity, most of the process is manual, costly and time-consuming

The VUKUNET Platform for digital out-of-home media (DOOH) network operators and vendors, and its sister ADVUKU booking platform, were conceived and designed specifically to address the way advertising agencies approach media buying, and then make it much easier for both the buyers and networks to run revenue-generating campaigns.

The fast-emerging DOOH media industry – which sees networked digital displays running targeted content in everything from medical offices to commuter rail cars – is widely regarded as the next big media. But planners buying “time” on these disparate and fragmented networks must navigate through a maze notable for its lack of common distribution platforms, media and measurement standards, value propositions or even nomenclature.

Using VUKUNET, the entire media transaction process is handled on a common platform. The universal playback Ad-Player runs on any Windows-based PC. It operates independently of the digital signage playback software the network operator is already using.

Using instructions from a central server, the VUKUNET Ad-Player sits in the background while the incumbent digital signage content management software (CMS) plays out media. Responding to scheduling instructions and mapped to the PC's system clock, the VUKUNET Ad-Player takes over the full-screen on command and plays out advertising content, and then minimizes when its time slot is over. The player does not stop or have any interaction with the network's own digital signage playback engine.

The VUKUNET central platform introduces levels of granularity and advertising media accountability not previously seen in the DOOH sector. At the player level, VUKUNET provides sophisticated device monitoring and reporting tools still uncommon to the sector.



NEC Display Solutions of America is driving adoption of its VUKUNET platform on the understanding that the industry needs to get better organized, and that NEC and everyone else wins when that happens. The company regards VUKUNET as a new horizontal service layer that sits above the vertical sectors of the media planning industry, network operators and the scores of software companies that provide CMS for networks. The intent is to complement and enhance the current ecosystem of networks, vendors and aggregated ad sales efforts, not disrupt it.

VUKUNET's origins trace back several years, to the relatively early days of DOOH networks.

NEC Display has a large sales team that works with many of the industry's most recognized software firms, and an even larger solutions team that manages and executes rollouts of networks of all sizes. Being right in the thick of the digital signage sales, planning and deployment process taught NEC's people many things – particularly that few projects were realizing their full potential.

One of the biggest reasons is that ad revenues rarely met the client expectations. The promise of cost recovery and/or revenue generation through advertising was not happening because the networks did not have the ad sales experience, agency ties or network size to have much success. New companies that aggregate inventory over many networks have presented improved selling

approaches, giving the DOOH media buy a bigger footprint. But planned campaigns may span multiple platforms and formats, requiring extensive hands-on work for proper execution.

With NEC's success in the professional monitor business, and its goal to improve the growth of the digital signage sector, the company started looking at ways to better enable the media sales and placement process. It was evident, pretty quickly, the keys were going to be a central service built with media planning needs in mind, and some way to avoid all the roadblocks and detours of trying to get ads running across dozens of different software platforms without any manual intervention.

"We were looking for the least invasive way to approach this," explained Mike Corcoran, the Senior Director of IT for NEC Display Solutions, "as well as take much of the work and cost out of the process for everybody who gets involved in ad transactions."

An NEC team started putting the business requirements and functional specifications together in early 2008. Though known in many markets as a display technology company, NEC really had a vast amount of direct experience to draw on. NEC is one of the largest IT companies in the world. The company also already has a digital signage software platform written for the Japanese market, which has also been translated to English for use in Australia. But NEC was looking for an ad-driven solution, not another CMS.

Detroit-based Campbell-Ewald, a Top 10 US advertising agency, was engaged by NEC to help aid the design – from the agency perspective – the ideal DOOH planning platform, layering in all the profiling, targeting and audit information that would be required by Campbell and other top media planning houses. The model was then counter-balanced to also address the different needs of network operators.

With the final model mapped out, Project Leadership Associates, a Chicago-based Microsoft Gold-level technology consulting firm, was engaged to build VUKUNET and ADVUKU. At the peak of development, there were as many as 40 software engineers building the web platform, user experience and the Ad-Player. PLA engineers continue to work on the platform as it evolves, using both

experiences and ideas that come in from the user base.

"Starting with a clean slate and a goal of making something work far better helped accelerate VUKUNET's development," says Ashley Flaska, NEC Display Solutions' VP of Marketing. "We started out designing this as an advertising platform, while the other kinds of solutions out there started as something else and then added on a digital out-of-home ad module."

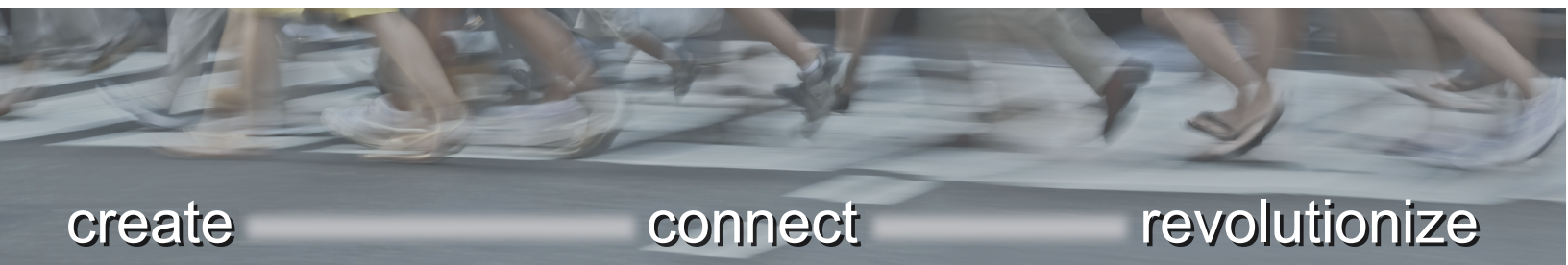
The VUKUNET service was launched in November 2009 at The Digital Signage Show in New York, with the first goal of creating awareness for the program among DOOH network operators and the vendor community. VUKUNET's proponents then started building awareness in both the advertising media industry and the AV and systems integrator communities that work with businesses to deploy and often manage digital signage networks.

As expected, NEC's adding software and services to its digital signage offer generated surprise and some instant opinions questioning what a display hardware company knew about the advertising and software development businesses.

"The proof is in the platform," says Pierre Richer, president of NEC Display Solutions of America, and the primary driver behind VUKUNET. Richer also suggests people tend to forget that NEC is a \$40 billion computer and communications giant, and IT infrastructure is part of the company's core competency.

Using Web services and Microsoft's .Net application framework, the VUKUNET service provides a depth of service, detail and accountability not previously seen in the DOOH marketplace. While even the smallest DOOH network operators are welcome to register for the service, they are being required to adhere to the same standards as the largest media companies active in the sector.

Registration requires attention to detail about the network and its traffic, viewing time, programming and demographic attributes, and filters are in place to second-guess and block attempts to "game" the system with inflated audience numbers and characteristics. The platform has been designed to follow the audience measurement guidelines developed by the Digital Place-Based Advertising



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Association (DPAA), and the VUKUNET service is undergoing the process to be accredited by the Media Ratings Council, the respected self-regulating body set up to secure for the media industry and related users audience measurement services that are valid, reliable, and effective. VUKUNET is set to be the first digital signage technology platform to receive the accreditation.

The advertising transaction process is simple. Network operators register on VUKUNET and profile their network and availability for third-party advertising. Media planning companies register on ADVUKU and use its services to locate and sort networks that meet their audience, timeframe and budget requirements. The media planners can then create an offer that goes directly to networks, stating what they want and what they are willing to pay. Or the planners, more typically, use a Request For Proposal to multiple networks, asking what Cost Per 1,000 ad rate (better known as CPM) the networks will accept to get the buy.

Since no contracts need to be implemented, NEC earns its money through a service fee and then also provides a percentage of revenue to the AV or systems integrator that brokers the network arrangement with VUKUNET. The same incentive applies to digital signage platform providers who bring their network customers into VUKUNET. The vast majority of the revenue share goes to the DOOH network operator. NEC covers all the central infrastructure fees as well as collections and revenue distribution.

Part of the development process for the VUKUNET Ad-Player was ensuring it ran independently of the playback engines already being used by software providers. The software team tested the player

on several mainstream digital signage software platforms in a lab setting, and then ran field trials on more units from a variety of providers. That experience further familiarized the development team with the network challenges, hardware demands and requirements.

Corcoran says the technology team expected some push-back from digital signage software platforms worried about external applications running in conjunction with their own software, but notes multiple applications happily co-exist on millions and millions of business PCs every day. He also says VUKUNET will take the extra step to ease worries by developing a certification program for the various CMS software players.

The patent-pending VUKUNET player design introduces a level of device management rare to most digital signage solutions, with the player able to interrogate the playback device and screen and provide a detailed diagnostic and status snapshot.

NEC's investment to date, and the model chosen, should be a clear signal to any observers that the company went in with its eyes open and is committed to helping build the advertising side of digital signage. "If the ads don't get sold, we don't make money. I don't know how much more skin we can put in the game," says Richer.

The VUKUNET platform is not just about software and enabling technology, says Flaska. "As we start to get real traction, we will continue to evolve what the ad platform does. "We are going to continue to lead this industry and continue to enhance the platform. The good thing is that we have the backing to keep moving forward with this. NEC, globally, is fully committed to VUKUNET."

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