CASE STUDY
2nd Generation Intel® Product Core™ Processors
WAND Digital Restaurant*
Quick Service Restaurant (QSR) Industry

Simplifying System Management in Quick Service Restaurants

WAND* solution employs a single interface to manage store systems based on 2nd Generation Intel® Core™ processors

CHALLENGES

- **Simplify system management:** WAND wanted the ability to centrally manage their systems, which would minimize support costs for their customers, especially those with thousands of franchised restaurants.
- **Support more display zones:** WAND needed a cost-effective graphics solution capable of delivering more frames-per-second (fps) and more zones with both static and dynamic content simultaneously.

SOLUTIONS

- **Remote management:** WAND incorporates Intel® Active Management Technology (Intel® AMT)[1], which allows a single IT console to service systems located anywhere, even when the operating system is not functional.
- **High performance graphics:** Eliminating the need for expensive add-in graphics cards, the Intel® HD Graphics 2000, integrated on 2nd generation Intel® Core™ i5 processors, renders WAND's award winning content without jitter.

"Our digital signage, POS and back office systems can be remotely managed from one location."

Myles Mjolsnes
Product Manager
WAND Corporation

Walking into a modern quick service restaurant (QSR) is like entering a microcosm of digital systems – both customer-facing and back office – working to deliver patrons a better experience. Eye-catching digital menu boards feature dynamic content that actively engages customers and conveys messaging more effectively. The drive-thru is more efficient thanks to outdoor digital menu boards and order confirmation displays that speed up the food ordering process. Point-of-sale (POS) terminals carry out customer transactions, and back office systems help restaurateurs run their business, rounding out a total store solution.

The WAND Digital Restaurant* integrates these digital systems together, thus providing a cohesive and comprehensive way to maximize and manage the business. Boosting sales, captivating high definition (HD) digital menu boards grab the attention of customers by presenting different menus, nutritional information and order status. Providing invaluable insights, WAND*'s solution generates reports that reflect how the store is influencing buyer behavior, stopping employee theft, reducing operating costs, stacking up against the competition, and improving overall customer satisfaction, among others.

"Restaurateurs can utilize one, highly scalable and reliable interface to manage their QSR, which has never been easier, faster or more secure than with WAND Enterprise," says Myles Mjolsnes of WAND*.

Figure 2. Outdoor Digital Menu Boards (Photo courtesy of the WAND* Corporation)

Keeping these systems up and available is critical; otherwise business could be brought to a standstill. Mindful of the importance of system availability and the need to minimize operating expenses, WAND wanted to integrate top-of-the line remote management technology capable of addressing many system issues remotely, thereby decreasing support costs. In addition, WAND sought higher performance graphics capable of rendering more complex and compelling content.

The WAND Digital Restaurant*

WAND's Digital Restaurant solution provides a unified restaurant technology suite developed and designed specifically for quick service restaurants (QSR), whether a single-store franchisee or a multi-unit enterprise. Running on Intel® processors, this customer engagement and store management solution combines enterprise management, digital menu boards, POS and back office systems, and analytics, as illustrated in Figure 1 and briefly described in the following:

Enterprise Management

WAND Enterprise Manager enables quick and secure access to every part of the Digital Restaurant using a comprehensive interface. Customizable business rules and centralized management provide control over many aspects of the business, from digital content and promotional campaigns to scheduling.

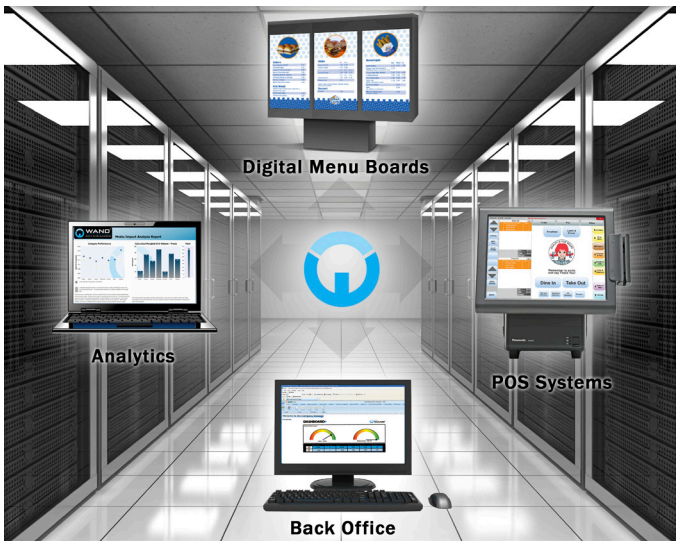

Figure 1. WAND Digital Customer Engagement and Store Management Solution for Quick Service Restaurants

Digital Menu Boards

WAND Digital delivers unprecedented content flexibility, customer interaction and entertainment, and high definition (HD) quality, both indoors and outdoors. HD panels with integrated order confirmation displays can boost revenue through suggestive selling. According to Mjolsnes, digital menu boards attract seven to ten times more customer attention than traditional static menu boards.

- **Indoor Digital Menu Boards** eliminate the need to constantly replace plastic menu strips and give customers a tailored buying experience. Convenient menu scheduling (e.g., breakfast, lunch and dinner) shows customers exactly what they can order.
- **Outdoor Digital Menu Boards** display HD content using durable, long-life hardware and software designed especially to withstand the elements. WAND's powerful management and leading-edge content standards are carried out by bright panels that enable convenient viewing, even in direct sunlight and bright headlight glare (Figure 2).
- **Dynamic Nutrition Management** presents a dynamically updateable nutrition and product education experience to customers. The dynamic nature of digital menu boards provides the flexibility to adjust to state and federal labeling standards without requiring a complete menu redesign.

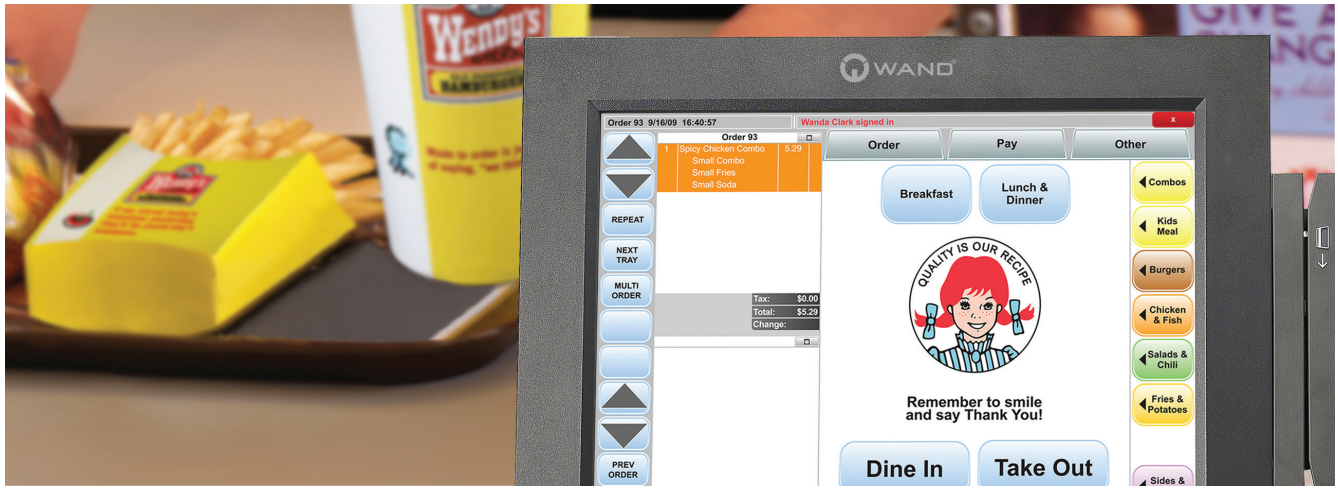

Figure 3. POS System (Photo courtesy of the WAND* Corporation)

POS Systems

WAND NextGen POS (Figure 3) combines efficiency with customer satisfaction. Up-selling opportunities, on-the-fly order updating, Payment Card Industry (PCI) compliance and conversational ordering create the buying experience of tomorrow.

Back Office

WAND Back Office solution merges labor scheduling, sales reports, inventory and cash management, and a closing procedure wizard into one dynamic and customizable dashboard.

Analytics

WAND Analytics provides QSR managers the best way to measure trends, performance and store metrics, and shows how they impact the bottom line.

Reducing Equipment Support Costs with Remote Management

Today, almost every digital signage and POS system is connected to a network in order to access media content and information from back office systems. Network connectivity is also used by technicians who monitor and manage systems from a remote, central console. Compared to sending someone onsite for ongoing support and repairs, remote management saves considerable time and money.

Taking remote management to a new level, Intel AMT[1] allows IT consoles to fix a wider range of systems issues, even when the operating system is down. For example, it's possible to repair corrupted drivers, application software or the operating system for a non-responsive signage system that won't run or boot. This can be done because Intel AMT implements a unique capability (i.e., circuit) in the Intel® chipset that can access and control the system, even when it is powered off or the software is corrupted. This circuit establishes an 'out-of-band' link that allows the system to communicate with a management console without relying on the system's standard networking functionality.

Intel AMT is a cross-platform solution, meaning it can support digital signage systems, POS terminals, kiosks and servers, as shown in Figure 4. By employing Intel AMT-based management solutions, restaurateurs can significantly lower their total cost of ownership (TCO), as described in the following:

Reduce Repair Costs

When a restaurant system doesn't boot due to corrupted software (e.g., OS, driver or critical application), the usual remedy is to send a technician on-site to reload the software image. Using Intel AMT, it's possible to remotely boot a device from a networked drive (golden disk) with known good software, which greatly aids troubleshooting. IT can also remotely change BIOS configuration settings, and load new drivers or operating system, whether or not the system is running.

"The advance capabilities of Intel® AMT features facilitate higher levels of uptime and reduced resolution times," says Megan Walsh, segment marketing manager of retail and transaction solutions at Intel.

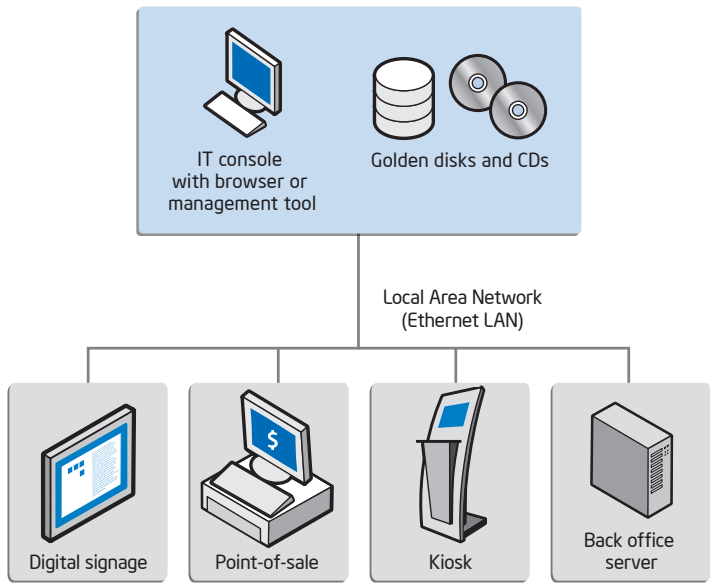

Figure 4. Retail Remote Management Example

"The low power consumption 2nd generation Intel® Core™ processors reduce operating costs, and this is particularly important as there can be as many as 12 systems at a single QSR site," says Myles Mjolsnes.

Track Inventory without Physical Interaction

For many restaurateurs, performing a fixed asset inventory can be time consuming and resource intensive, especially when equipment resides in geographically dispersed stores. Eliminating human intervention, Intel AMT enables management systems to generate a comprehensive list of hardware and software components for any device that's plugged into the network and an electric socket. This capability also allows IT departments to track software, by version and license, for every device on the network.

Keyboard-Video-Mouse (KVM) Feature Added

Recently, Intel AMT was enhanced with a feature called KVM redirection over Internet Protocol (IP), permitting the keyboard-video-mouse (KVM) for an IT console to control and display the graphical user interface (GUI) of a restaurant system in the field. No additional hardware is required.

To resolve issues, technicians can reboot the system, observe errors, launch tools for analyzing failure data and guide the OS to fix the error, all as if they were sitting in front of the device. This capability is especially helpful with digital signage displays, which don't have assigned users who would normally call the Service Desk and describe what the system is doing.

Improved Graphics, Lower Power

Boosting performance, WAND systems are equipped with 2nd generation Intel® Core™ processors that provide power-efficient performance, excellent media and 3D graphics, and I/O flexibility. Compared to Intel® Core™2 Duo processors used in the prior generation WAND systems, the Intel® Core™ i5 processor with Intel HD Graphics 2000 offers about 2.5 times greater graphics performance. The vastly improved video processing power of the new processor facilitates the playback of rich content, such as nutrition information and live video feeds. As a result, WAND was able to support more concurrently running videos/animations, facilitating the development of more engaging content at no less than 30 frames-per-second (FPS).

The integration of Intel® HD Graphics into 2nd generation Intel Core processors eliminates the need for a discrete graphics card, which reduces latency, power consumption and system cost. Likewise, Intel® Intelligent Power Technology lowers idle power consumption through architectural improvements such as integrated power gates and automated low-power states. As a result, system power consumption is adjusted in real-time based on actual processor loads.

ABOUT WAND CORPORATION

WAND Corporation is the future of QSR technology, spearheading a convergence between point-of-sale, digital engagement and analytics. The company's Digital Restaurant* solution includes POS and back office systems, award-winning digital menu boards, analytics, enterprise management and support. WAND is 100 percent QSR focused and has 25 years of industry experience developing innovative solutions for franchisees and corporate brands.

Centralized System Management

The quick service restaurant (QSR) industry is going digital, deploying computer-based POS, kiosk, digital menu boards and back office systems. Restaurateurs need a simple way to manage all these systems from a central location, since they can't rely on individual stores having tech savvy employees. Now it can all be done from a single remote console, using the WAND Digital Restaurant solution that manages the operational and support aspects of these systems. By incorporating Intel AMT and power-efficient Intel processors, WAND has lowered the total cost of ownership of its systems and eased the transition to the Digital Restaurant.

For more information about the WAND Digital Restaurant, visit **www.wandcorp.com**

For more information about retail solutions from Intel, visit **www.intel.com/go/digitalsignage**

SOLUTION PROVIDED BY:

[1] Intel® Active Management Technology (Intel® AMT) requires the platform to have an Intel AMT-enabled chipset, network hardware and software, as well as connection with a power source and a corporate network connection. With regards to notebooks, Intel AMT may not be available or certain capabilities may be limited over a host OS-based VPN or when connecting wirelessly, on battery power, sleeping, hibernating or powered off. For more information, see http://www.intel.com/technology/manage/iamt.

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