

JCM: A 'Vizion' for the Future

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It is not uncommon for companies involved in high technology to have a short history. New companies appear every day and, unfortunately, many disappear daily as well. There are not many companies that have a history spanning several decades while also producing cutting-edge technology today. Some find it difficult to keep up with technology, others become too rooted in one technology and are unable to move forward, others just fold. The companies that have longevity frequently find it difficult to revamp not only their product and production lines but also the company's entire philosophy. Yet there are those rare few successful technologies companies with rich, long histories. This month we examine one: JCM.

JCM, which stands for Japan Cash Machine, was formed in 1955 in Osaka, Japan. It was originally developed as a service and support organization for cash registers, and from there it was a natural progression into cash handling and currency-related activities. The company always has been heavily invested in research and development and the engineering and design of modern-day

technology.

Ever mindful of emerging trends in its industry, and watchful for opportunities outside of its business unit, JCM was poised for a long life from the beginning. It recognized how a dynamic company, ready to react quickly to changes and trends, and willing to create changes and trends itself, could prosper greatly. Today, the company functions in the industries of gaming, vending, retail, financial, transportation and security, as well as other unique-application industries.

In 1988, the company became incorporated in New Jersey. Initially focusing on cash registers, the surrounding Atlantic City casinos caught the attention of JCM President Aki Isoi. He came up with a revolutionary concept for casinos: the side-mounted bill validator. Isoi went to Las Vegas and worked diligently with IGT to embed such a bill acceptor into gaming machines. Although many felt that it would not and could not work, the idea met with great success. Sigma Gaming in Tokyo began using the product in pachinko parlors, and in the early 1990s, the first up-stacker bill validator was born.

With the new ability to insert money in escrow and then draw it back out for wagering, handle, decisions per hour and revenue all increased. Today it would be difficult to locate any Class II or III gaming machine without a bill validator. From this technology came other improvements, such as the ability to read TITO tickets, coupons and promotional vouchers.

Over the years since its breakthrough in the casino industry, JCM found that it was not only able to change the times themselves but also change with the times. "It's always disruptive for companies that develop a proficiency or expertise in one area when a new one comes along," noted Tom Nieman, vice president of global marketing for JCM Global. "It's challenging to embrace a new technology, but there is no alternative. We have fought hard to be able to keep reinventing JCM, and today we are on our fourth generation of a gaming-application bill validator." (First the DBV, WBA and UBA, and now the iVIZION.)

JCM's latest validator, the iVIZION, is a generational leap forward with contact-image sensing ability. It captures an image of the full note, ticket or medium that is inserted into it. iVIZION is the foundation of intelligent validation and opens the door for innovative new applications. "We know that over the course of the next six to 10 years, a number of futuristic applications will be added on top of it," Nieman said. "It is a much more powerful device than we've ever had before. We will help operators to exploit all of its capabilities."

One of those capabilities is one that has not quite made it to the mainstream in North America yet—smart card technology—although it has gained traction much more quickly in Japan and Europe. Smart card technology has tremendous potential, but cost efficiency isn't one of them yet. However, once that happens, it is predicted that it will start to migrate into the transactional world and even become one of the preferred methods. This has been considered in the future-proof design of iVIZION. It will take advantage of technologies still on the horizon and those expected to be developed, including networked gaming. It is also a platform from which new technology can be exploited.

JCM's bill validator solutions have always pioneered technologies that became mainstream in other applications and commonly used by other manufacturers. For example, the Sentry II uses an LCD screen to provide full imaging right at the bezel of the BV. "We have led the market with the first Sentry bezel using all of the icons that allowed a technician to look at last note played, denomination, and the like. The technical icons allow a technician to know the problem before opening the door," Nieman explained.

A proper display, such as an LCD panel, might result in the technician not even having to open the door. The LCD also provides for multi-language support, expanded capability for consumer and the technician. According to Nieman, it is being targeted toward the consumer, the floor personnel and the technician. Based on the mode that it is in, it will deliver messaging to one of those three stakeholders. "We have had a very strong reception to that," he said. "It has been well received, and that begins to show, just scratching the surface, some of the benefits and pluses that iVIZION will provide to the operator."

Support for networking, especially a fully compliant open network, is also a plus for operators—and probably more like an imperative. As such, JCM designs most of its peripheral devices with multiple USB ports. This provides more information to the slot platform, but the opportunity also arises for a sub system of peripheral equipment to speak directly to the back-end server, with the bill validator acting as a hub. This means that regulatory issues won't bog down the device, as would happen if the peripherals worked through the game platform. Instead, a tremendous amount of performance and maintenance data can be transferred to the back end without having to go through the platform if you take advantage of the new USB ports. For example, Nieman says they can all send status issues and data directly to the back-end system. The image of the note—or millions of notes—can be captured for later analysis. Analysis of those images, of accepted and rejected bills alike, can also improve the software almost constantly, raising questions like, Why was the note rejected? Was it a mechanical issue such as dog-ear on the note, or was it something on the note? The counterfeit protection potential goes up with every note scanned, and this amount of data could never be passed through current communication protocols.

Some European regulatory bodies are beginning to request the scanning of serial numbers through the use of Optical Character Recognition (OCR). Down the road, this technology could surely reduce counterfeit transactions but also serve a purpose in preventing and capturing those doing this activity. By being able to store the image of the rejected counterfeit note, as well as accessing the image of the person at the machine and determining trends such as time-of-day transactions, could prove invaluable to law enforcement.

Ongoing enhancement and improvement campaigns for JCM include updating the software of the device to work with new currency. There is a new \$100 note that will be released around February 2011. Today, JCM's UBA (as well as all competitor devices) requires the download to take place directly on the device. On an open network, either communicating through the platform or a preferred method of updating outside of the platform through the server, update capability takes place seamlessly and at any appropriate time. Operators incur significant expenses to have technicians open machines, download the updates, confirm the updates and then complete a paperwork trail. There is also the cost of these machines being taken down and sitting out of revenue mode. Future updates could be done automatically while maintaining a complete and accurate audit trail of updates and with downtime consisting of seconds.

Over the four generations of JCM validators in North America, multiple millions have been sold, and today, of the approximately 1.2 million Class III gaming devices in operation, JCM has bill validators in approximately 65 percent to 70 percent of those. This shows the long-term commitment to the product and support for both the product and the customers, as well as ongoing improvements and pioneering of technology from JCM. This also carries challenges, especially in supporting legacy equipment. "I suspect there is no casino operator who would want his cell phone to be as old as his bill validator," Nieman surmised. "If you are operating a WBA, there are certain limitations. Eventually, you must replace the units in order to gain use of the new technology. We try diligently to update and support legacy devices, but eventually the capabilities of the old technology reaches its limits. Plus, we have to innovate and lead with new technology."

JCM devices offer amazing access for the operators and technicians. The ICB® 2.0 RFID memory module allows for detailed web-enabled reporting. Using web-based applications and hand-held devices such as iPhones or PDAs, an almost real-time environment is available for accessing information about the JCM devices. This gives operators access to more information when it's most critical.

In keeping with pioneering technology and innovation, JCM is pleased to announce their ability to provide display solutions for their customers. Niemen explains that JCM has been involved with a variety of different integrators when it comes to LCD display: "We have just entered into agreements with two of the largest brands. We represent LG Displays for game applications and sales direct to the gaming OEM. LG has never sold finished product direct to OEMs before. LG recognized that the gaming industry is a significant opportunity for them, and they sought out our expertise as the industry's leading component supplier."

In the application of large-format panels used as a video wall or standalone panels used in slot signage or end of aisle, the entertainment-centric casino environments are using more of this technology than ever. JCM now represents major brands, including Samsung, NEC and LG in the gaming casinos in North America. "JCM has had a strong response to offering these display solutions to our existing customers in the slot departments, sports books, bingo and keno parlors," Neiman explained. "This has become so successful that JCM is now representing Samsung's in-room hospitality product. We recently completed a project in a Native casino in California, replacing approximately 250 of their in-room televisions with new Samsung products. We are very excited to be associated with three of the largest brands in that business."

This further demonstrates JCM's desire to redefine itself. While the company may be known primarily for its bill validators, JCM always looks around to see what else it can provide for the best-in-class peripheral equipment. This is, after all, how JCM entered the gaming industry in the first place. "You can't just be good at one thing and believe you can make that one thing forever; you need people to do that and need people looking forward for the next wave of technology and position that technology to solve new and emerging problems for our customers," Nieman said.

To that end, JCM has two or three new products coming down the line, both inside and outside of the gaming industry. It has expanded into the kiosk industry, where it has met with great success. It has also made major inroads into the banking and financial industries working on component development. "This gives us a broader base, a diversification," Nieman noted. "Gaming has been wonderful for the past 20 years, and there are other areas that we can excel in, such as banking/financial, retail or kiosk. And our work in these areas will benefit our gaming customers because we may find technologies that will have applications in casinos. We look for opportunities and think of our business as a global venture. We have offices around the world in Japan, Las Vegas, also London, Dusseldorf, Sydney and Hong Kong. We know that it is imperative that we maintain a more global approach on each and every product. If a product does well in Europe, for example, we take a detailed look at the product and determine what it can offer the North American market."

This also keeps a supply fresh blood flowing through the company. New technology from outside areas such as banking could result in a new technology being implemented into the gaming industry—and vice versa. JCM reports that its banking partners were impressed with the company's operational track record in the highly regulated gaming market. Banks see the casino and gaming industry as a role model, and consider it as highly regulated, safe and secure. If a company is able to operate in the gaming industry, then it will have great success in the banking environment.

The "Vizion" of the Future

JCM Global's iVIZION, named one of Casino Enterprise Management's Top 10 Slot Floor Technologies for 2010, is more than just a bill validator. It will surely mark the new standard to which currency validation transactions will

full image of each note or ticket is captured. It uses optical note centering for increased reliability as well as mechanical anti-stringing technology. Using two processors allows for unparalleled speed, self-calibration and makes it compatible with all gaming protocols. The introduction of new technology will make this bill validator more robust and easier to install and support, as well as offering a high acceptance rate for valid currency notes and reducing downtime.

JCM's Products



Universal Bill Acceptor (UBA®)

- JCM technology delivers the highest performance and security to worldwide markets
- Superior magnetic and optical sensing technology
- U.S. & international currencies up to 85mm
- Backward compatible, high-impact plastic cash box



iVIZION™ Bill Acceptor

- Contact Image Sensor (CIS) technology
- Two high-speed processors
- Fastest note-to-note processing speed
- 99 percent-plus acceptance rate



DBV-300 Bill Validator

- High impact plastic bill validator
- Optical and magnetic sensors
- Intelligent 3-way LED for easy field diagnosis
- High-speed 4-way acceptance



Intelligent Cash Box (ICB®)

- Provides accounting accuracy across entire gaming floor
- Increases efficiency by reducing common errors in casino-drop and count processes
- Automatically links cash box to gaming asset
- Supplies independent data directly from the bill validator
- World Bill Acceptor (BNF-2000)
- U.S. and international currency acceptance
- Self-feed bulk note module

-Intelligent Cash Box capability

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