

White Castle Hands Employees Self Service

White Castle is America's oldest fast-food hamburger chain, and has many innovations to their credit. But when they tired to reduce the flow of bags of employee paperwork so managers could focus on running restaurants, it proved tougher than it looked. Then they explored fingerprint authentication and the results have been rewarding. In their first production rollout, 6,000 employees were able to successfully do self-service electronic healthcare enrollment from nearly 400 locations across an 11 state region in just four weeks. What used to be a paperwork nightmare, now has almost no manual administration.



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White Castle System, Inc., America's first hamburger chain, was started in 1921 by E.W. "Billy" Ingram and J. Walter Anderson (the inventor of the hamburger bun.) White Castle has remained a privately held, family owned, restaurant chain and

Ingram's grandson, E.W. "Billy" Ingram, III is the current CEO. Unlike many fast food companies, White Castle does not franchise in the U.S. Its nearly 400 stores in 11 states are all company owned and operated. Today, White Castle is second only to McDonalds in per-restaurant dollar sales among hamburger chains.

Harold & Kumar Go to White Castle (2004) Two twenty-something roommates go through a life changing journey, as they spend a night roaming the state of New Jersey in search of White Castle hamburgers.



The famous White Castle building was modeled after the Chicago Water Tower – the only building to survive the 1871 Chicago fire. And White Castle’s buildings marked the first successful architectural use of porcelain enamel over steel. As evidence of the place of White Castle in U.S. history, some of the original White Castle buildings are now listed in the National Register of Historic Places.

White Castle was the first fast-food hamburger chain to sell a billion hamburgers, achieving that milestone in 1957. A near-fanatic following has developed over the years among those who grew up or went to college in areas where they have stores. Songs have been written about White Castle, and in 2004, a movie “Harold and Kumar go to White Castle” tapped into the craving White Castle fans have for those small, five-hole burgers sold by the bag. Those five holes, by the way, were the innovation of a White Castle employee who in 1947 discovered that punching the holes enhanced the taste. He put the idea into the company suggestion box, and by 1951 White Castle had patented the five hole burger.

Of Forms, Bags and Paper

As White Castle has grown to 13,000 employees at nearly 400 stores, however, hamburgers aren’t the only thing they have by the bag. The paper forms they have to circulate from the stores to the regional and home offices come in bags too. In fact a few years ago, they established a “forms and bags committee” to look into ways to reduce the paperwork load.

Don Long, Sr. Director of Information Services and Technology at White Castle, said “We have district supervisor level people running out to the castles all the time to pick up these bags full of forms. In many cases they have people going to the castles five times a week to pick up paper. Most of our data flows

from the castles into a regional office, and then on to the home office. On certain days three or four districts show up in the regional office and dump their bags out, and they’ve got a whole table full of paper stacked a foot high. What we’re trying to do is cut through some of that.”

White Castle has spent significant time looking into using electronic forms to reduce that paper flow. But it turned out that it wasn’t easy to replace the bags of paper. “We had a done a lot of work to

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try to create electronic forms,” said Long. “And I kind of got tired. Most of the forms got shot down because the people here at the home office required signatures on the forms.”

Learning What Doesn’t Work

One of the methods they investigated, was an electronic signature pad. “We started out with one of the [pads] that you use for credit cards in a regional store, where you sign your name,” said Long. “We integrated that into our application. When we got done, we looked at it and said ‘what do we have here?’ We’ve got a signature that may or may not really be that person’s signature, and who’s going to be the handwriting expert to verify that? We looked at it and said ‘you know, this is not going to work at all.’ It really never got out of test.”

“I guess we really didn’t think the whole process through as far as how are we were going to be sure that this a valid signature,” said Long. “You could get the valid signature through that pad – but it goes beyond that into being able to identify people on the other end of the line. We wanted to be able to provide employee self-service, but you can’t show them sensitive data unless you definitely know who is on the other end of the line. You can’t trust passwords, and we didn’t want to do mag stripe cards, because it just doesn’t work for us.”

Serendipity and Biometrics

About two years ago, unrelated to the forms project, White Castle had to deal with an aging physical security system. “We had a security system in the [data center,] and it didn’t have the capability to segment the building to be able have certain people go certain places,” said Long. “It had a combination lock. We did some audits, and it took the auditor about two minutes to watch somebody enter their number and gain access to the computer room. Those locks were getting old and falling apart and we decided to test out [fingerprint biometrics] as a possibility. You think of the fingerprinting as being science fiction and all that kind of stuff, [but] it worked well for our data center, so we were getting more in tune to the idea.”

Having seen fingerprint sensing work in their physical security application, the technology was no longer an unknown. But it was too expensive at that time to use in nearly 400 White Castle stores. “Then the price on [fingerprint sensors] came down substantially,” said Long. And that opened up the possibility that finger-

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print biometrics might be a solution for the problems that had been preventing the moving to electronic forms.

Trying it Out

The next step was to test out the fingerprint technology in their application environment. That environment has been designed to make it easy to deploy applications in a standardized way. “We took [Sybase] PowerBuilder and used that development environment to develop a development environment for ourselves, [called Workflow Manager],” said Long. “Now what we do is paint data windows, flip switches to do security, and use a lot of standard routines to reuse code. So every time you need to do something, you don’t need to rewrite it. If you want to do unique things, you do functions within that environment.”

White Castle used DigitalPersona’s SDK to integrate their fingerprint sensors into their Workflow Manager environment. “Now, as far as our applications, it’s part of that [Workflow Manager.] And all you’ve really got to do is reuse that code,” said Long.



Selling Biometrics Internally

Before they started any deployment, the team worked internally to assure that this approach would create an acceptable solution. “When we came up with the concept, we went to legal – the legal department – to see what they thought,” said Long. “To see how far this could go, and whether it would be accepted by them as a legal signature. They did some research and came back, and I was surprised to find that they not only accepted it, they really encouraged it. Because they felt, based on some of the research they did, that there were problems [with the existing paper system] and that this would actually be better than what we were doing.”

With the legal department behind the idea, they then went to the benefits department to get their buy-in to develop a forms application in a pilot deployment. “[Since] legal was big on it and wanted benefits to implement this,” said Long, “We really didn’t have any issues with acceptance.” So the discussion turned to deciding which form would be chosen as the first one implemented.

The Pilot Begins

“We decided to do the health enrollment form first,” said Long. “With our team members filling it out wrong, and then [the form] being shipped up here, finding things wrong, and having to ship it back, it was a real problem.” So White Castle designed an electronic version of the

form, and created a fingerprint biometric enabled application for employees to interface to it. “[In] March and April of 2004 we did pilots in St. Louis,” said Long. “We did that for a month or two, and then started rolling system wide.”

In order to eliminate as many manual steps as possible, the application was integrated into the company’s systems to act on the form once it was accepted. “We had to tie this together so that when you fill out your enrollment, we’re able to get the data off of that form,” said Long. “We have a routine in the Workflow Manager that takes a screen snapshot and turns it into a TIFF file. In order to legally show that we got the signature, we [use that routine to take] a snapshot of the signed form, put that in our enterprise content management system, and link it to their benefits account and employee ID. The data also goes into the health benefits system which creates an automatic deduction record, to do a payroll deduction.”

Most of the restaurant employees who use this application do not normally use computers on the job. So White Castle had to create a way for them to access the application in each restaurant. “We had back office PCs in the castles,” said Long. “And we were doing a lot of different things with those. About three years ago we put in a multi-use printer that is a scanner, fax, printer, and we integrated the scanner part with our applications. So we [already had] a lot of bases covered in being able to collect documents.” They added fingerprint readers to these back office computers, creating an employee kiosk for use in filling out the forms.

Bill Ingram and J. Walter Anderson built the first White Castle in Wichita, Kansas in 1921 for \$700.

Employee Acceptance

One remaining issue was how employees would accept using their fingerprints to authenticate their health benefits enrollment forms. “We did do a little pro-active stuff coming out,” said Long. “We explained the fact that it’s an algorithm and we couldn’t recreate your fingerprint if we wanted to. And it was not taboo to do paper, so people that really didn’t

“We were almost completed with the roll-out when we found out we were going to have to do an open enrollment, starting mid-October,” said Long. “They changed a lot of the features of the health plan, and went into more of an ala carte plan. They give you more options as far as what your deductibles and your premiums and those types of things are, so you can tailor a plan, whereas the old one was pretty

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want to deal with it, could use paper. We didn’t really want to be nasty about the whole thing.”

So how was acceptance in practice? “I was kind of shocked that very few people really did have a problem,” said Long. “We’ve had about 6,000 people [exposed to the system and] I think there were about five people that refused to do it. And we didn’t make a big deal out of it. It’s surprising it was that low.”

The Real World Intervenes

Just as the initial production roll-out was nearing completion, the company decided to change its health benefits structure.

much a fixed plan. So we had to build software to do an open enrollment, and then also the enrollment for the 2005 plan.”

“We had to really sweat the details to make it user friendly because these people aren’t used to doing applications,” said Long. “Some of the paper forms are nasty. [The health benefits form] asked questions that I didn’t know the answers to, like what plan did you go into? There were certain plans where [the insurance company] didn’t cover certain [geographical] areas, and [the form] asked that question. So what we did is program it in, based on the location, and went ahead and filled it in for them. So we avoided all the nasty questions.

In the end we took stats and the mean time to enroll people was two and a half minutes.”

Competition Breaks Out

An unexpected reaction was that during the open enrollment roll-out, the various restaurants become



competitive to see which one could get the most biometric forms completed first. “Once in a while there’s certain things that people pay close attention to,” said Long, “and this one seemed to be one of them just because it was different. There became kind of a competition. Within the first two weeks of the open enrollment, some of the regions had 80% to 90% of their people enrolled. And they were racing to see who could get it done first. That happens once in a while within the company, where there’s competition to see who can get done first, and I was shocked how fast it went. We enrolled 6,000 people in four weeks and it was pretty quiet.”

Finally, Electronic Forms That Work

Asked to assess the productivity improvement of this method Long responded, “The error rates were horrible on the old form, and the electronic form is really tight. Employees now have a secure and convenient way to enroll for their health-care benefits. There’s not a whole lot that people can do to mess that up. So the quality of the forms is good.”

“One of the people who was working on the forms and bags committee with me came in recently,” said Long. “They were putting together information for the next go around. He mentioned that one of the goals was to allow district managers to be able to manage 10% more castles by eliminating having to look at health benefits forms, new hire forms, and streamlining that process. That’s a million dollars if we accomplish that goal, which I don’t think is very difficult to accomplish.” ■

White Castle began using frozen hamburgers in 1931 and all outlets were using them by 1933.

