



ISS45 Product Strategy and Direction

MB-ISS45-1025 Issue 2
September 15, 1995

Many important customers were very excited about **ISS45** at the FMI MarketTechnics show in Houston. A common thread to their questions about the product revolved around how ICL had developed this product (“Where did it come from?”) and what the long-term strategy is, (“Where is it going?”).

This bulletin is to clarify the overall product strategy and direction of **ISS45**, explaining its roots and its future direction.

WHERE ISS45 CAME FROM

Part of the advantage grocers have long enjoyed with ICL POS systems has been our unique commitment to investment protection. Original architectures such as S18 and DTS 500 were migrated over time, instead of leaving users stranded by cutting off the old products and starting over. Of course, the system architectures had to be robust enough to prosper over such an extended period; these products had the foundations and quality to grow and change with the industry over two decades, a feat virtually unheard of in the technology sector.

There are two clear benefits of a technology migration strategy:

- Customer investment is protected, because their ICL systems can be enhanced and upgraded. While other systems of their original era have no current value, for example, S18 is virtually the only POS system to thrive in the “open systems” era. Also, customer operations are protected, since extensive training is unnecessary for upgrades.
- Customer risk is decreased dramatically: a brand new scratch-built system will have hidden faults and problems that take many years to eliminate. Also, standard system features and set-up options are often missing until subsequent releases, limiting current system value.

ISS45 represents the culmination of over ten years of development and refinement of POS systems. Some of the benefits of this long history are:

- Features, options, reports and parameters required by literally thousands of users have been built into the product over the years. For example, **ISS45** provides over **100 screens** of parameters and set-up options, on-line and real-time changeable. The depth and richness of **ISS45** goes far beyond what can be shown on a simple check-box “feature matrix”.
- The user interfaces have been carefully refined over a long period of time, and remain fast, familiar, straightforward and consistent.

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- The fundamental system architecture has been continuously strengthened over seven major releases by the same engineering team. Rather than start over from scratch, ICL has been able to take what we've learned and apply it for the Grocer's benefit.

As examples, **ISS45's** amazing performance (scan and print 3½ items per **second** per terminal), scalability (run 250 terminals per store at that speed), Replication/ Resiliency/Recovery (automatic takeover, dynamic rejoin, restart tasks in process, full terminal independence and redundant central point services and applications) could only be accomplished by a product development team with a long-term directive to constantly improve upon the current state of the art.

- For a brand new system with a long future stretching out ahead, early versions of **ISS45** are behaving like a mature, solid product. Original test sites have run smoothly, with no failures (POS, Controller, Communications, Applications) or crashed systems.

ISS45 brings its back office software from PC-Master. This system has been an industry bellwether since 1984, and it is now installed in dozens of countries and on every continent. It was the system which first put industry-standard PCs to work for the central operation of POS, and has remained at the leading edge ever since.

The front end terminal software of **ISS45** has its roots in ICL's hypermarket system, GMS2. Also popular in many countries over a long period of time, the GMS2 transaction set was put to work for ICL's worldwide StoreMaster product, and then migrated with the North American RPS/Supermarket system. Launched in 1992, RPS/Supermarket was an instant success, with a remarkable record of both software and hardware reliability. (To this date, after years in the field and hundreds of installations in 5 countries, there are still no known cases of a "system down" due to either software or hardware failure.)

But with the growing interest in systems based upon PC-terminals, ICL was determined to bring to grocers a new system which would use such hardware. At the same time, powerful new customization tools would be added (ISS45 Presentation Manager, ISS45 Query Language, CustomLink C) and the already powerful system architecture would be further strengthened with Ethernet TCP/IP and a services-based scheme where all principal system components — POS, Applications, Communications and Controller Services — could run freely on any terminal or PC in the system. Performance would be dramatically enhanced, and the Replication/Resiliency/Recovery schemes would be reengineered into unparalleled elegance. Finally, we were determined to deliver a **true** open system, the first in POS with (1) System Access, (2) Data Access, and (3) Functional Access, the three defining components to a full open system. **ISS45** is the result.

Unlike most systems which are introduced and promised months before their planned delivery dates (and years before their **actual** delivery dates...) ICL chose to wait until **ISS45** was successfully installed — in a 60+ terminal hypermarket, no less — before committing the system to prospective customers. The product is now generally released and ready for prime time. And full ISO 9000 Registration stands behind every step.

WHERE IS IT GOING

One of **ISS45's** slogans is "never obsolete". With the PC industry now 14 years old and still gaining strength, it is safe to say that this standard will remain at the center of POS for many, many years to come.

And the **ISS45** software, with its extensive customization facilities, can be endlessly enhanced and added to by users, software consultants, (and even our own engineers). No longer will the user need to rely upon the original vendor for new features. This is a critical insurance policy: people will need to make POS do things in the year 2005 that we aren't even thinking about today. Its unique open access to functional capabilities will make **ISS45** stand alone.

But there are other changes in the wind. Certainly, operability on a wide range of terminal types, of operating systems, of associated software applications will be desired in the coming months and years. ICL is fully committed to the **ISS45** architecture, and its continued long-term strength in the marketplace. Not a claim idly made, we offer the following as backup:

- Although **ISS45** looks like it appeared “instant and complete” upon the market at the Houston 1995 MarketTechnics show, it is really the result of years of planning and development. Besides the product history described above, we made the enormous investment to construct the entire system to “C” code in an object-oriented, client-server scheme. As such, there is no “spaghetti code” anywhere in the product, and the opportunity for bugs is dramatically reduced. The willingness to make this investment underscores our commitment that **ISS45** will move forward in a decades-long development path. (Off-the-shelf 4GLs, which might speed development time but bog down the ultimate system performance were rejected.)
- Just as important, a major investment in the development of **ISS45** software tools, unique to the POS environment, was undertaken. It takes a very long time to create such tools, and it takes a long time for them to pay off, limiting their use to long-term strategic systems. But these tools now are done, and they have already allowed extremely rapid development of new core features and functions. Furthermore, we have made some of these tools available (in full-strength versions) to software consultants, Resellers, and end-users so that they can use them for their own **ISS45** customization and development exercises.
- Application layers make the use of other PC terminals from IBM, NCR, Omron etc. possible without extensive delays. Drivers for some such terminals will be made available this year, and support of additional hardware types will be an ongoing facet of system development.
- Layers elsewhere in the system liberate **ISS45** from operating system limitations. Currently, DOS provides an excellent and extremely stable platform for all system elements without prohibiting the multitasking features available in the system. But the future will hold solid stable versions of Windows and other GUI-based systems. ICL will provide **ISS45** on some such systems as they become strategically important and stable. For example, demonstrations of **ISS45** over 32-bit Windows NT systems were shown at MarketTechnics; both a Windows NT back office and Windows 95 terminal version are in development for 1996 release.¹
- A distinction: **ISS45**'s layered architecture has been carefully designed to avoid the typical pitfalls found in other “layered” systems. Typically, performance dramatically suffers as objects are created and handed off from layer to layer and to other objects. But **ISS45**'s FastPath™ layering design and internal elegance avoids such problems while offering all the benefits of true independent architectural layers in the application. It's different, and properly suited to a true On-Line-Transaction-Processing (OLTP) system.

Performance is a critical factor; not just for scan response times but for headroom elsewhere in the system. Vendors with lesser core architectures will often make statements like “the price-performance curve for hardware will continue to drop, and soon you will be able to buy higher speed hardware at lower cost which will eliminate performance issues.” This notion is, of course, false: feature requirements in software will continue to consume all performance available to them from the hardware.² The only way that slow systems will benefit from faster chipsets will be if they don't add features. A fast architecture now will

¹ The NT back office will be released first, followed by the Win95 POS option. These will run independently; that is, users may select any combination of NT or DOS back office with Win95 or DOS front end.

² Does your Microsoft Word 6 run faster on a '486 than WordPerfect ran on a '286 ten years ago?

continue to be the fastest architecture, and take the best advantage of the technology. **ISS45** is in the industry's top position to leverage new hardware technology.

- This development direction continues into interworking schemes. Already, **ISS45** has been set into large systems demanding UNIX ISPs and using WANs with different types of interworking schemes.

So as you consider **ISS45** and how your grocers would use it, make sure that you understand the future of POS in their own eyes, and how they will want to move and migrate in the future. Here, **ISS45** has unparalleled advantages no other company can bring to your grocers:

- A complete and rich system,
- with a long history of successful ancestors,
- eliminating "new product" risk,
- but delivering a brand new product,
- already proven,
- with the architecture to support new hardware,
- and new operating systems,
- and new interworking schemes,
- and features we haven't even thought of yet,
- that can be added by us, you, or your customers,
- indefinitely.

Not a bad story, all in all.

To Your Success,

Tony
Tony van Beverer
Director: Supermarket Systems