A History of Distribution Channels in the Computer Industry

By:

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In 1951, Remington Rand introduced its Model 409, arguably the first computer designed specifically for the broad business market, rather than military or academic applications. Rand quickly ran into competition from IBM and other companies such as Digital Equipment (DEC), Honeywell, Control Data, and others selling (actually leasing was much more common then) computers via their own direct sales forces.

As the market for computers evolved, customers began to demand support and services that manufacturers could not afford to provide directly. Intermediaries, or **indirect channels**, emerged to satisfy these needs. This is their story.

### OEMs, Integrators and VARs

#### Original Equipment Manufacturers

In the late 1950’s and early 1960’s, a few manufacturers of factory and testing equipment began to experiment by incorporating early computers inside their machines. They were joined by entrepreneurs that designed peripheral devices that attached to computers from IBM, DEC and other computer suppliers. These machinery and “plug-compatible” peripheral companies were known as Original Equipment Manufacturers (OEMs).

OEMs, therefore, became an early indirect channel for computer manufacturers.

In 1965, DEC introduced the PDP-8, notable for its tabletop size, low power requirements, low price (under $20,000) and its availability through some early resellers. Many of these early resellers were OEMs who could combine their own peripherals or machines with a PDP-8 and sell a complete, turn-key computer system. Although DEC would later become known for its direct-sales mentality, it was the first technology manufacturer to truly reach out to indirect channel partners.

#### System Integrators

During the late 1960’s and early 1970’s many of the OEMs stopped manufacturing their own equipment and simply integrated hardware from other suppliers. This “integrator” business model attracted new start-ups as well as established consulting, time-sharing and other technology services companies. The integrators evolved into an established channel, referred to as “systems integrators” which today includes a diverse mix of large firms such as EDS, Accenture (formerly Andersen Consulting) and Computer Sciences Corporation; mid-sized companies such as Cambridge Technology or Keane; and a raft of smaller firms.

In the early 1990’s several hardware and software firms felt that they were leaving money on the table by selling through the large integrators. IBM in particular, under the guidance of Chairman, Lou Gerstner, began to bid directly on large government and corporate projects. Today IBM, HP, Oracle, Microsoft and others sell a mix of hardware,
software and consulting services directly to large customers (but, still work with independent integrators depending on customers’ preference).

Value-Added Resellers
During the 1970’s, some OEMs recognized that their customers had to spend a lot of time and money writing custom software. Sensing an opportunity, OEMs offered to write and maintain the software at a lower cost by retaining the right to sell the software to other companies in a given industry. Thus, was born the concept of industry or “vertical” distribution channels. Vertically-focused channels arose in healthcare, banking, law, government, manufacturing, etc. The vertical OEMs sold their software packages bundled in a turn-key solution including the computer and peripherals. These vertically focused resellers became known as the Value-Added Reseller (VAR) channel. Today, over 10,000 VARs exist in the United States alone.

Independent Software Vendors
Other entrepreneurs saw the same opportunity to write software for multiple customers. However, these entrepreneurs were programmers and didn’t want to hassle with selling or supporting the hardware. In the 1950’s and 1960’s, most software was written by the hardware manufacturer and distributed free to customers. However, in 1955 the Computer Usage Corporation sold a computer program to simulate the flow of oil. Computer Science Corporation and also ADR were early independent developers of software. Later, in 1972, five IBM software developers in Germany recognized that large corporate customers kept requesting the same type of business management (accounting, purchasing, invoicing, etc.) software. The five programmers left IBM, wrote an independent software product, and started their company Systemanalyse und Programmierung, now known simply as SAP. SAP and similar software programs were applicable to multiple industries or “horizontal” markets.

These programming firms are known as Independent Software Vendors, or the ISV channel. While ISVs may resell other companies’ software they, unlike VARs, typically do not resell any hardware, therefore, hardware manufacturers view them as an “influence-only” channel. Interestingly, many of today’s large ISVs such as Microsoft, SAP, Oracle, Siebel, etc. also maintain their own network of channel partners.

Computer Dealers and Franchisors
Back in the early 1950’s, Edmund Berkeley began selling a rudimentary computer kit (the Simon) through ads in hobbyist magazines such as Radio-Electronics. As more kit computers emerged, hobby shops such as Heathkit and Radio Shack, which previously focused on radios and other electronic gear, began to resell the computer kits. In 1976, Bill Millard, President of IMSAI, one of the kit manufacturers, decided to open a chain of computer stores called Computer Shack. After a lawsuit by Radio Shack, Millard changed the name to ComputerLand. ComputerLand almost did not make it. However, just as things looked bleak, Steve Jobs and Steve Wozniak came searching for someone to help sell their new Apple II’s and ComputerLand was saved.
In 1981, IBM released their blockbuster microcomputer, the original IBM PC. Frank Lynn & Associates worked closely with IBM on the channel strategy for the PC’s launch. Initially, IBM wanted to sell through department stores and its network of IBM Selectric Typewriter dealers. However, our research indicated a stronger market for business rather than consumer customers at that time, and business buyers wanted to buy from dealers that specialized in computers.

Many of the early computer dealers were novices, and IBM was leery of trusting the IBM name to such dealers. Therefore, IBM made its initial launch through a network of dealers owned by Sears, a handful of IBM-owned stores called IBM Product Centers and ComputerLand. The IBM Product Centers were meant to be examples to independent dealers as much as they were meant to actually sell products. IBM eventually sold the Product Centers.

ComputerLand thrived and opened both company-owned locations and franchised operations. (In the early 1980’s, these dealerships were walk-in operations. Even corporate customers would send someone from the computer department to walk into a dealership to buy PC’s and haul them back). Other companies such as Inacomp, MicroAge and Valcom emerged as competing franchisors. The franchisors made money by marking up the products they sold to franchisees and by charging them a fee (about 7% of the dealer’s total sales). However, the franchisor model began to fall apart in the mid-1980’s. Franchisees became more sophisticated and no longer needed the rudimentary hand-holding franchisors offered to justify the franchise fees.

IBM, Compaq and other leading brands significantly limited the number and type of dealers to whom they would sell on a direct basis. Therefore, to carry these brands most dealers were obligated to join one of the franchisor groups.

Independent dealers willing to sell other brands such as Kaypro, Osbourne, or later IBM clones, such as Leading Edge, bought from wholesalers (see below). Wholesaler pricing was typically much more attractive than prices offered by franchisors, albeit for lesser known brands. Wholesalers’ were willing to ship smaller orders unlike franchisors (who preferred to ship pallet-loads of IBM PCs). This forced the wholesalers to become more logistically efficient than franchisors, a fact that would come back to haunt franchisors. Franchise dealers became jealous of the independent dealers’ better pricing and freedom from paying franchise fees.

Exacerbating this problem, the price spread between leading brands (e.g. IBM and Compaq) and the emerging PC clones grew to as much as 30-40%!

At this time, ComputerLand became a strange company as Millard’s interest in the odd EST philosophy transformed the corporate culture. In 1985, ComputerLand franchisees revolted, lawsuits were filed and Millard sold the business into obscurity a few years
later. Other franchisors suffered dealer defections and the franchisor model ultimately imploded.

Freed of onerous franchisee fees, the dealers still faced problems in the mid-1980’s. The technology industry was going through a breathing spell in an otherwise frantic growth phase, prices and margins, while still healthy, were coming down and a variety of new competitors such as the BusinessLand chain, retailers like Soft Warehouse (later known as CompUSA) and Michael Dell’s direct telemarketing model were beginning to show up on the horizon. Consumers and small businesses felt intimidated by corporate-oriented dealers, and started to look for friendlier places to shop. Lastly, IT departments in mid-large sized companies were becoming comfortable with PC support and no longer relied as much on dealers.

Dealers responded by forming outbound sales teams. With demand lagging and telemarketers calling customers directly, dealers decided that waiting for corporate customers to walk-in was not a successful strategy. For awhile, key suppliers like IBM still required dealers to maintain a storefront. Over time this requirement faded away. Even so, many dealers still saw there revenues and margins declining as the PC heyday faded.

With oblivion staring them in the face, dealers found a new white horse to ride: Novell.

In 1983, Novell introduced the concept of local-area networks (LANs) based on file-server technology. Many dealers saw LANs as a way out of the “box-pushing” margin-shrinking, PC business. Novell, led by Chairman, Ray Noorda, cultivated dealers by lavishing them with intensive training and support. The installation of LANs was complex, way beyond the skills of most users. Dealers suddenly became “network integrators” and saw the higher-margin services (consulting, installation, maintenance, repair, etc.) portion of their business grow from 5% to 20%, 30% or even 50% of their revenue.

Today, while some pure dealers still exist, most have become network integrators. And, in yet another twist of the evolutionary tale, many network integrators have spun into new businesses such as security, database design/management, Internet-related services, middleware and a variety of other horizontal applications. These horizontal integrators are now often called “solutions integrators.”

Retailers

A few major retailers experimented with selling PCs and “shrink-wrapped” software in the early 1980’s. Companies such as Atari, Commodore and others began to offer lower-priced, consumer friendly systems that attracted retailer attention. Radio Shack, with its established network of electronics stores, operated below most companies’ radar by only selling their own TRS-branded systems.
By the middle to latter part of the decade, computer superstores emerged. Soft Warehouse (later renamed CompUSA), MicroCenter and Fry’s – with its distinctive Western-themed store in Palo Alto – were, and remain, the major names in this particular retail format. Superstores, which trace their beginnings to hypermarchés that sprang up earlier in France, offered consumers and small businesses someplace to shop and ask questions without feeling stupid.

By the early 1990’s, consumers and small businesses were becoming much more sophisticated in their use of PC technology. And, arguably, PC’s were becoming somewhat easier to use. PCs were becoming a mass market phenomenon. New retail formats such as Office Supply Superstores, Consumer Electronics Superstores, software specialty chains, Warehouse Clubs, cataloguers and even traditional department stores, discounters (Wal-Mart, K-Mart) and mass merchandisers (Sears, Target, etc.) began to stock PCs, peripherals and software. Retailers, like many other channels, went through a period of bankruptcies and consolidation in the late 1990’s. Now only 1 or 2 chains dominate each particular format, and many chains are making acquisitions as part of a cross-formatting strategy.

**Wholesalers – The Two Tier Model**

In the early 1980’s, while IBM, Compaq and other leading PC manufacturers would only sell to large dealers or those affiliated with one of the franchisors, a few entrepreneurs started up wholesale companies to handle peripherals and software, and sell to independent dealers. The early wholesalers included Software Distribution and Micro D (both of whom were bought by Ingram Industries), Softsel and Microamerica (later merged into Merisel) and Tech Data among others.

Without the sponsorship (or volume) of the big PC manufacturers, the wholesalers had to become efficient with very small orders to make any money. As PC margins fell in the late 1980’s and early 1990’s, the wholesalers’ efficiency allowed them to increasingly take market share from the franchisors. Even the big PC manufacturers, who initially spurned the wholesaler channel, recognized the inherent advantage of dealing with a middleman focused on logistical efficiency.

During the early 1980’s an entirely different set of wholesalers was also beginning to eye the computer industry: electronic component wholesalers, such as Avnet, Arrow, and Hallmark, etc. These firms were established in the 1920’s and 1930’s to sell parts for radios. In the 1960’s and 1970’s they turned their attention to selling passive components to industrial companies that were incorporating electronics within their products (to this day, these distributors are sometimes still called “industrial distributors”). The distributors’ evolution continued as they moved from selling individual components to complete subassemblies. Then in the early 1990’s, Digital Equipment made a major channel strategy shift and authorized several of the electronic component distributors to sell entire (mid-range) computer systems; not just to industrial end-users, but to integrators, OEMs and VARs.
Today, these “industrial” distributors try to distinguish themselves from the “PC” distributors by focusing on more complex products and offering more value-added assistance to their VARs. Often selling mid-range systems from IBM or HP, the “industrial” or “value-added” distributors help their VARs configure systems, close deals, and answer technical questions.

Throughout the 1990’s, the logistical efficiency of the PC wholesalers and the “industrial” distributors proved to be a huge advantage as overall industry margins declined. The wholesale market has become extremely concentrated with smaller players having been acquired or squeezed out. The two wholesaler models overlap today; however, the PC wholesalers dominate the Wintel scene while the “industrial” distributors are much stronger in mid-range systems, storage, middleware and database software.

On the “PC-side,” the market is dominated by Ingram and Tech Data (which acquired Computer 2000 in Europe). Synnex (which acquired ComputerLand, Gates and Merisel Canada along the way) is also making a hard charge. Among the “industrial” distributors (who now prefer the phrase value-added distributor or systems distributor) Avnet (which acquired Hallmark) and Arrow lead a small, but somewhat more diverse group of wholesalers.

The majority of business-oriented computer systems flow through this “two-tier” model. Systems and peripheral manufacturers ship finished product to the wholesalers who aggregate orders from VARs, OEMs, integrators (and even large retailers). Increasingly the wholesaler will “drop-ship” product directly to the end user as a service for the second-tier channel. However, wholesalers are facing a new threat as manufacturers are increasingly selling directly to customers via the Internet in a bid to match the low-costs established by Dell’s online distribution model.

Online Channels

Intending to study medicine at the University of Texas, Michael Dell instead started to build and sell PCs out of his dorm room in 1984. Unable to afford or gain the attention of dealers, Dell expanded his business via a telemarketing strategy. Ten years later, a recent University of Illinois graduate student, Mark Andreessen, developed Mosaic, an easy-to-use browser for the rapidly expanding Internet, thus opening the way for widespread e-commerce.

Contrary to what many believe, Ted Waitt’s Gateway Computers, rather than Dell, was the first company to actually tap the Internet as a vehicle for selling computers. However, Dell perfected the highly efficient, build-to-order supply chain model. Dell’s combination of an online model and a taut upstream supply chain provides the company with a significant cost advantage over its competition. In response, competitors, particularly HP (which has now acquired Compaq/DEC), are exploring
new ways to compete with Dell’s low cost model. The strategies include matching Dell’s direct, online model (in conflict with their traditional channels), reducing the role of wholesalers, and paying VARs and solutions integrators a smaller “agent” fee rather than a complete channel margin, etc.

The Future

As Niels Bohr, the famous physicist, once said, “Prediction is very difficult, especially about the future.” Still, some current trends are likely to strongly influence computer industry distribution channels over the next several years.

Hardware prices and margins will likely remain low. Therefore, manufacturers will continue to pursue Internet-based strategies and rearrange/reassign channel functions in new, hybrid channel models driven by advances in supply-chain technology. Third and even fourth party logistics companies (e.g. Fed-Ex) may play an increasing role.

In general, all channels will increasingly chase revenue from services rather than hardware or software. Services, particularly more value-added services, offer much higher margins. With so many companies focusing on services, a channel-conflict train wreck is likely. Already, suppliers are talking about “rules of engagement” to define how they will work with, through and around channel partners to deliver services.

Value-added partners, as they always do, will look for new technologies requiring services beyond the capabilities or capacity of in-house IT staffs. Likely technologies here will probably include web services, RFID, wireless and security applications. Value-added channels will also likely find novel ways to partner with IBM, HP, and other direct services organizations and/or stay out of their way by focusing on small and mid-sized customers.

Retailer consolidation is likely over within a given format, however, as the Boise/Office Max deal implies more inter-format arrangements will probably take place. Retailers have paid lip service to the concept of multi-channel marketing, e.g. linking their stores, catalogs, web sites, field reps, etc. Over the next few years they are likely to actually make this happen. Emerging technologies, such as RFID, will also allow retailers to create new efficiencies and unique shopping experiences through better inventory management, self-checkout, personal shopping assistants, biometric payment systems, creative electronic displays and kiosks, etc.

“PC” and “Value-added” distributor models will likely collide. “PC” distributors are increasingly focusing on more niched, value-based product segments. In addition, the actual amount of value offered by wholesalers and desired by their VARs is somewhat questionable. Furthermore, many manufacturers are beginning to question the roles and value offered by distributors. E-commerce and integrated supply chain technology may render the current wholesaler model obsolete.
Across virtually all channels we will probably see manufacturers trying to link their Customer Relationship Management “datamarts” with those of their channel partners.

In short, the last 50 years have produced a rich and varied diversity of channels; some long-lasting, others transitory. The next several years promise nothing less.

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