E-commerce at Newark InOne
DePaul University

Newark InOne Profile

• Largest small order electronic component distributor in North America
• Focus: B2B
• Founded – 1932
• Headquarters – Chicago, IL
• Employees – 1,500 plus
• FY2003 Sales - $430 Million
  – 8,000 orders/day
  – 48 branches
  – 125 field sales people
  – 2 call centers
  – Website and e-procurement channels
• Division of Premier Farnell, Inc.
  – Sales - $1.3 Billion 6,000 employees, distribution in 24 countries worldwide
Who are our customers and what do they buy

- Customers
  - Design engineers: Purchasing based on product attributes
  - Purchasing: Purchasing based on part #'s and price
  - MRO: Purchasing based on part #'s, replaces and availability

- Product
  - One stop shopping with giant assortment
    - 150,000 stocked sku’s from 400 manufacturers
    - Capacitors, connectors, enclosures, power supplies, etc.

- Service
  - 95% ship same day (overnight)
  - Kitting
  - Reserved inventory (scheduled orders)
  - Sourcing of non catalog items from 1 million sku database

Electronics b2b Landscape

- OEMs (Intel, AMP, AVX, etc)
  - Only sell direct to major manufacturers like DELL
  - Production orders scheduled 3 months ahead
  - Websites focused on technical content for engineers
  - Primarily EDI and XML integration

- Distributors (Newark Electronics, etc.)
  - Handle smaller non product orders for OEMS
  - Carry inventory for same day shipment
  - High service and price
  - Robust sell side websites

- Electronic component portals (PartMiner, USbid etc.)
  - Launched in dot.com bubble
  - Spent millions on promotion and content
  - Do not carry inventory – functioned more as broker
  - Struggling for viable business model (abandoned transaction fees, moving to value added services and subscription fees)
E-commerce is important to Newark and our customers

- Consultants forecast that 30% of electronics sales will be done over the Internet.

- Internet is one of the favorite channels for high tech electronic corporations and engineers.

- Electronics is very good for internet sales.
  - Product is commodity
    - No difference between Pentium chip from Newark or a competitor
  - Product is high value and low weight, so easy to ship.

Order processes are changing

- Old
  - Locate product in 2000 page catalog
  - Call up sales rep at local branch to order
  - Sales rep is source for more information from mainframe.
New Order Processes

• New
  – Self service: Customers locate correct product on website or e-catalog
  – Order electronically (website, XML, e-mail, ARIBA network, EDI)
  – No human interaction with Newark
  – All information must be available electronically and easy to use

E-Commerce channel supports the Newark strategy of surrounding the account and delighting the individual

• Surround the account and delight corporate
  – Support customer e-procurement systems like ARIBA and Commerce One which reduce their purchasing costs.

• Delight the individual
  – New services on website Newark.com like parametric search and datasheets that make their life easier.
Newark.com website delights the individual with new capabilities not found in other channels

- Extremely effective website search tools allow quick searches of 150,000 catalog sku’s in seconds
  - Parametric search
  - Free text search
  - Part # search
  - Easy product comparison
- Higher level of technical product data
  - Images, product attributes, data sheets
- Powerful customer service capabilities:
  - Order history
  - Order status
  - Order confirmation e-mails
  - Order ship notice with tracking # e-mails
- 7/24 availability

Newark surrounds the account and delights corporate by supporting E-procurement

- Newark Fortune 1000 customers are making multi-million dollar investments in procurement systems like ARIBA and Commerce One expecting to save tens of millions by:
  - Lower their purchasing costs through automation
  - Improve their reporting
  - Eliminate off contract purchasing

- Newark supports all major e-procurement systems

- We are industry technology leader and support custom E-catalogs, accept XML orders, and punchout.

- Many of our competitors are too small to support E-procurement systems.
Newark Electronics Industry Leader in E-procurement

- 130 live E-procurement partnerships
- Support all major platforms: Ariba, Commerce One, SAP, Requisite, Oracle, TPN, PeopleSoft, and I2
- ARIBA
  - Certified “Ariba Ready” program
  - Support CIF and “PunchOut” catalogs
  - CXML transactions
- Commerce One
  - Certified Commerce One affiliate and enabled supplier on Commerce One.net market site
  - “Roundtrip” Certified
  - XCBL transactions
- E-marketplace partnerships
  - Exostar, Pantellos, Covisint, and Market Mile

E-procurement continues to grow at rapid rate

Newark live E-procurement partnerships are growing fast

Commerce One and ARIBA are most popular
Customers need significant Newark support for E-procurement

- **Expertise**
  - Veteran e-procurement project managers for e-catalog creation, pricing, testing, documentation, rollout and ramp up. Guide customers.

- **E-Catalogs (product data)**
  - More than 20 different major formats plus hundreds of customer specific formats
  - Good product descriptions, commodity code classifications, and contract pricing
  - Static and dynamic catalogs (punchout/roundtrip)

- **Transaction capability (transaction data)**
  - XML, EDI, e-mail, web retrieval
  - Customer specific order processes must be automated: procurement cards, special handling, multiple ship to addresses, tax status, etc.

- **Fast turn-around**
  - E-catalog creation and updates, transaction testing, customers specific processes

Two ways to get E-procurement catalog information to customers

- E-catalogs hosted on customer internal procurement systems updated quarterly
  - Newark part #
  - Manufacturer part #
  - Short product description
  - Contract price

- Punch-out catalogs updated nightly or hourly
  - User comes to “private” Newark website to search product and bring order back to their procurement system
    - Allows more powerful searches like search by attribute
    - Show richer product data
    - Show inventory or lead times
ARIBA e-procurement customers browse and order products in two different ways

- Newark catalog file hosted by customer
- Grainger catalog file hosted by customer
- Dell catalog file hosted by customer
- Newark product search and shopping cart via 3rd party (Actiant)
- Dell product search and shopping cart on Dell.com

Customer ARIBA system (including product search and shopping cart)

Static E-catalogs sent by suppliers

Dynamic “Punchout” catalogs hosted by suppliers

Data Requirements for E-procurement catalogs

- Search
  - Newark or manufacturer part numbers
    - Part # search
  - Short descriptions
    - Free text search
  - Product classification codes (taxonomies) to search by drill down by product category
    - UNSPSC, RUS, customer specific
      - Started by hand coding, now tools
- File Formats vary platform and customer preference
  - ARIBA, Commerce One, Oracle, ...
  - CIF, tab delimited, comma delimited, flat file
- Contract pricing
- Custom catalogs - Only list some items or commodity classes
E-procurement systems: Punchout

- Offers data not available in E-catalogs
  - Images
  - Technical attributes
  - Inventory / lead times
  - Datasheets
  - Columnar contract pricing
  - Substitutes
  - Complementary products
  - Links to manufacturer websites
- Moves burden of managing catalog content to suppliers
  - Millions of sku’s
  - Quarterly updates

Customer’s ever increasing needs in eProcurement

- Portals
- mini catalogues
- static catalogues
- UNSPSC
- Part #
- Single column price
- Word descriptions
- Full catalogue 100K
- Simple punch-out
- Static inventory
- 100% descriptions
- XML Orders
- XML Confirmation
- Punch-out columnar pricing
- Punch-out for SAP, Oracle and bespoke
- Punch-out - parametric search
- XML Invoice
- XML Ship notice
- XML Scheduled orders
- Smart logic out of stock
- VMI
- Web Services
E-procurement competition

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Rapid deployment of new technical capability critical to maintain our lead in E-procurement in FY04

- Exostar integration
  - XCBL 3.0 (B)
- Customer load utility for in-house punchout (N)
- Expand capacity and improve robustness of e-procurement backbone (B)
- Daily product loads, price updates and hourly inventory load for in-house punchout (N)
- New ARIBA XML messages plus upgrade to XML 1.2 (B)
- In house ARIBA punchout (F)
- In house punchout for SAP and Commerce One customers (B)
- Integrate with XML 27 more customers (B)
- 4 new XCBL messages (B)
- In house punchout for Oracle customers (B)
- Parametric search for in-house punchout customers (B)
- Web services integration for customers (B)

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Newark Technical Challenge: Integration of customer facing front end systems with back end

Customer facing E-commerce systems
- Newark.com (Java)
- E-procurement ARIBA, Commerce One (XML)
- CD-ROM Catalog (Java)
- I-tracker Stockrooms (Java)

Integration Layer

Back End ERP systems
- BPCS/AS400

Search for Integration Solution

Business Requirements
- Automate the process from end to end; no human intervention
  - Receive Orders and send confirmation electronically
  - Support Price Check and Inventory availability
  - Support Order Status
- Scalable and easily maintainable process
- Cost efficient

Technical Requirements
- Availability of up to date data, anywhere & anytime
- Can accept and translate various XML formats (XCBL, CXML, etc…)
- Reduce implementation and deployment time
3 Major E-procurement Business Needs

1. Punchout or Roundtrip Website
   - XML Form
   - E-Catalog Request
   - Catalog Delivery
   - Separate website

2. E-catalogs
   - XML Order Submit
   - XML Order Confirmation
   - XML Price & Availability
   - E-Catalog Delivery

3. XML Transactions
   - Newark

IONA’s Orbix E2A Originally Purchased to Allow XML Transactions from Multiple Platforms

Ariba - CXML 1.3 messages
- Purchase Order Request
- Purchase Order Response
- Server Availability Request

Commerce One - XCBL 2.0 with MQC messages
- Server Availability Request
- Purchase Order Request
- Purchase Order Response
- Order Status
- Price Check
- Availability Check

Single Set of Newark E-proc. XML Messages
Newark E-procurement Architecture to support XML E-procurement Messages

Orbix E2A™

Auto-order & Order edit tool

Newark E-procurement Harness

MQ Series

Newark E-proc database

BPCS

Hardware & Software – Newark E-procurement Architecture

SunE250
1 GB Ram
2 CPU 400 MHZ
100 GB HD

Sun Solaris 2.7
IONA Orbix E2A
Oracle

Ariba C1
XML messages

Sun E450
2 GB Ram
4 CPU 400 MHZ
50 GB HD

Iona Message Processor
(Java), MQ Series

Backend
AS400

Sun E450
2 GB Ram
4 CPU 400 MHZ
50 GB HD

Oracle
Customer product search preferences changing

- Punchout replacing static e-catalogs
  - More up to date information (updated daily instead of annually)
  - Supports columnar pricing (volume discount)
  - Can view inventory
  - Access to more powerful non ARIBA or C1 product search tools
    - Parametric search
  - Shift data management / load work to suppliers
  - Requires integration testing with each new customer
  - 40% today

Customer moving away from stand alone e-procurement solutions back to their ERP systems

- Most popular systems
  - 2000
    - ARIBA, Commerce One, Intellisys etc.
  - 2003
    - SAP, Oracle, I2, etc.
- Most ERP packages now come standard with built in e-procurement functionality
Common XML language and data taxonomies starting to splinter

XML
- Consensus is either CXML or XCBL
- Problem is people are not staying current
  - Many customers still on 2 or 3 version back from latest due to cost
  - Suppliers required to support all versions
- Documentation has been poor from some vendors
  - Inadvertent creation of new versions at every customer

Data
- Still many different product taxonomies
  - UNSPC, RUS, etc.
- Same problem - customers not staying current due to cost

XML integration difficult for some vendors

- ARIBA - integrate to network and you are integrated to all ARIBA customers
- Commerce One - must integrate with each Commerce One customer separately
- Portals - similar but not identical XML protocols to ARIBA or Commerce One
  - Exostar, Covisint, Pantellos
- Starting to become more like EDI - where every customer must be mapped individually
- Primary advantage - still fairly few messages, cost to support not too high
Many e-procurement vendors and portals closing down - stranding customers

- Intellisys
  - Ford, Texas Instruments
- Purchase Pro
  - Hotel industry
- TotalMRO
- MRO.com
- ARIBA sales are down 50% and still losing money
- Commerce One losing money and just sold transaction network to E-scout

E-procurement demands stretching other parts of company

- Back end ERP responses needs to be real time with customer systems waiting for answers
  - No more batch processing
- Product data must be 100% accurate
  - Electronic catalogs make pricing errors obvious
  - Easy to filter out and reject sku’s with bad descriptions
- Customer want 7/24 support and no down time
  - Customers pushing users to 100% purchases through e-procurement systems. Don’t want any excuses not to use.
- Sales staff must be literate and able to answer questions on how to find product and order on customer e-procurement systems
  - Newark trains its staff on ARIBA and Commerce One
Customer focus on getting ROI on E-procurement systems is changing

- **2000 Theory**
  - increased productivity of purchasing staff
  - Expected to save hundreds of millions for several million dollar investment
- **2000 Actual**
  - Supplier enablement and user training huge issues
  - Did not get volume through system
- **2003 Expectations**
  - Cost savings from eliminating off contract purchases
  - Improved reporting allows detection of areas of spend to cut
  - Volume gradually coming through system
  - Does help in vendor rationalizations

Supplier leaders in E-procurement

- Newark Electronics
- Grainger
- Boise Cascade Office products
- MSC Industrial
- Staples
- Software Spectrum
- Dell Computer
Portals no longer play major role in North America

- All supplier run industry portals were bust
  - Customer benefit on stop shopping was not strong
- Even customer run industry portals are struggling
  - Economics are not clear
    - Does Covisint buy better than GM
  - Heavy infrastructure costs
- Portals still being invested in in Europe and Asia
  - What do they know that USA doesn’t?
- Original purpose of cashing in on IPO is dead

Good News

- XML Integration with customers is finally happening without massive pain
  - No longer require months of technical effort
- Customers are starting to put significant volume through their systems - best ones approaching 50%
  - Cost savings for Newark by eliminating manual order entry and customer service
- Newark is winner from e-procurement,
  - Surviving vendor rationalization, going from 1 of 8 to 1 of 2
  - Strong e-procurement program winning awards and praise from customers
- Government and international customers starting to adopt e-procurement