



Intellex

Extended Capability RFID



Company Profile

▪ History and Milestones

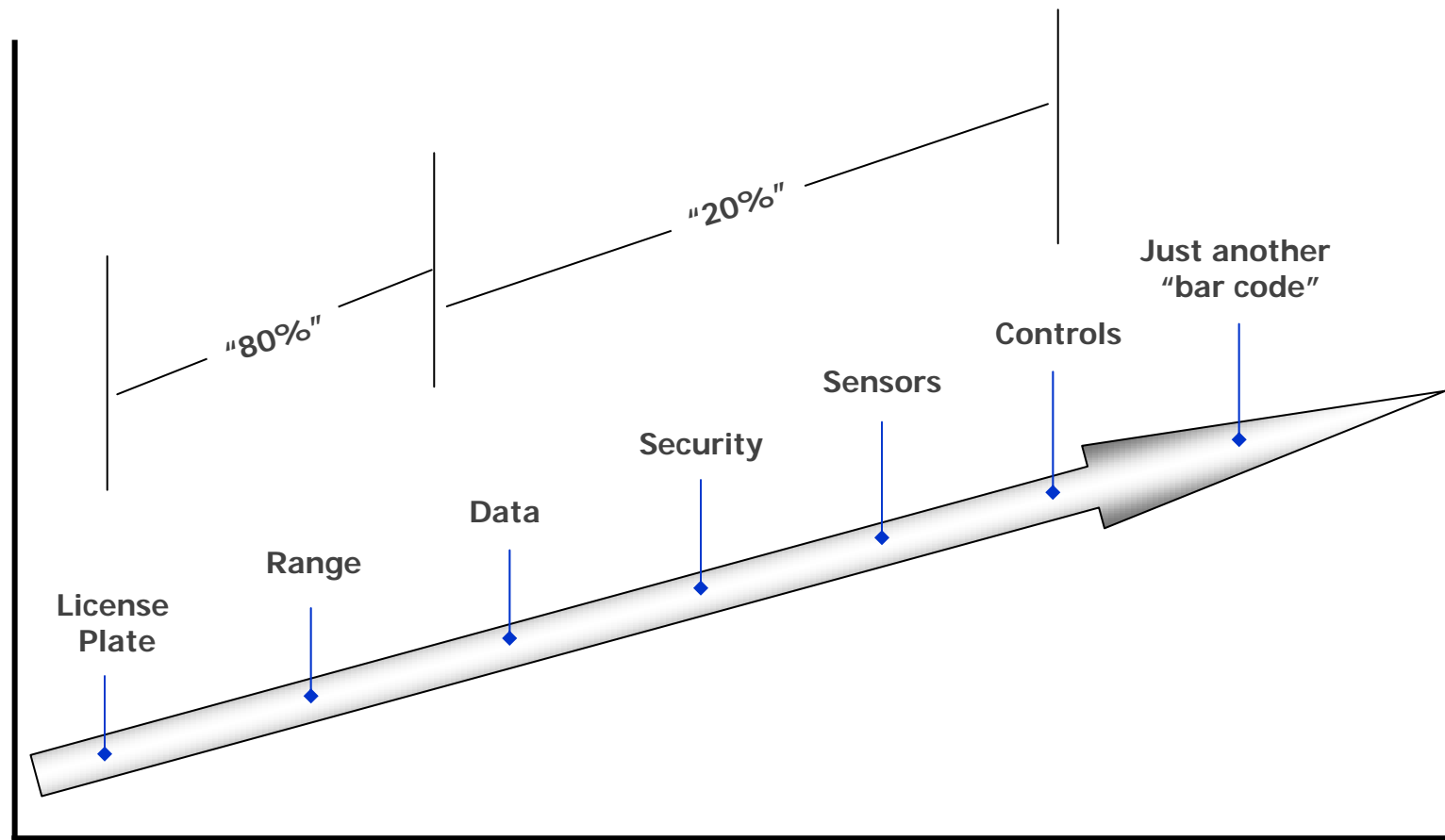
- Founded in 2003; investors include Morgenthaler, Woodside, Alloy, Selby Ventures
- Current customer engagements in automotive, aviation, retail, agriculture, gaming, and other high value asset tracking
- Strategic partners includes Tyco, Mitsubishi, Ingersoll Rand, Rockwell, NCR; over 40 resellers/integrators
- Over 33 patents filed; driving EPC and ISO standards

▪ Experienced Management Team

- Richard Bravman, CEO; former CEO of Symbol Technologies/Motorola
- Peter Mehring, CPO and EVP; founder of UMAX, former VP of Hardware at Apple, SVP of Engr at Echelon
- Michael DiFilippo, CFO; former VP of Finance at Symbol
- Steven Smith, SVP Sales; former VP of Sales at Symbol
- Russell Shikami, VP Ops; former VP of Ops at UMAX, VP of Engr at Echelon



Extended Capability RFID Vision



Technology Evolution Driven by Business Needs



Solutions



End-to-End Solutions



Yard Management

- Vehicle Inventory and Tracking
- Equipment Tracking
- Equipment History
- Driver-to-Truck Association



Airlines and Aviation

- Container Tracking
- Cargo Manifest
- Parts Management
- Parts History



Transportation and Logistics

- Returnable Asset Tracking
- Vehicle Delivery History
- Asset Inventory and Location
- ASN and e-Manifest



End-to-End Solutions



Asset Tracking

- Reusable Assets
- Utility and Industry
- Sporting Equipment
- Hospital Equipment and Supplies



Hospitality

- Casino Management
- Hospitality Personnel Tracking
- Loyalty Cards





Products



EPCglobal Classifications



- **Class 1 (ratified)**
 - Identity only, passive tags
 - Backscatter (reader talks first)
 - Write-once Read Many times (WORM) or R/W, typical range ~3 m
 - Lowest cost

- **Class 2 (proposed)**
 - Identity+ memory, passive tags
 - Backscatter
 - R/W extended memory, typical range ~3 m
 - Low cost

- **Class 3 (proposed)**
 - Battery-assisted passive tags (identity +memory)
 - Backscatter
 - 50 meter range
 - Moderate cost

- **Class 4 (proposed)**
 - Active tags, battery tags
 - Active transmission (tag-talks constant)
 - 100 meter range
 - High cost



When Do I Need Class 3, Battery-Assisted Passive RFID?

- Need to read longer distances between tags and readers, to 50 meters
- Need to increase read reliability in challenged environments such as glass, metal, outdoors, etc.
- Need to store additional information on the tag
- Need security to protect the data on the tag
- Need Active RFID capabilities, but at a significantly lower cost of tags

Intellex Product Family



Battery-Assisted Tags

- 50 Meter range in real world; metal, liquid, temp, outdoor reliability
- 64Kb total (60Kb rewriteable) on tag memory
- Block level data locking w/ perma lock
- Low profile, multi form factors
- IP67 rating



Multi-Protocol Readers

- Class 1 and Class 3 compatible
- Network IP ready
- GPIO interface
- XML interoperability; SDK available



Special Purpose Antennas

- Long range
- Omni directional
- IP67 rating



Integrated Chips

- C1G2 Ext. Memory
- Integrated single chip design



Intelleflex Advantage

- Reliable in challenged environments such as metal, liquid, outdoors
- 50 meter read range in real world
- 64Kb total/60Kb rewriteable on-tag memory (approx 3-4 pages of text)
- On-tag security, data protection, block level locking w/ perma-lock
- Multi-protocol readers
- Fraction of the cost of Active RFID tags (up to 5X lower)
- Based on EPC and ISO standards





Customer Profiles



General Merchandise Retailer

- Business Challenges

- Reusable assets such as roll cages, dollies critical part of operations
- Used to ship inventory and supplies from DC to retail centers or other DCs
- Operational personnel often misplacing retail assets such as roll cages and dollies
- Very large DC (1+ M sq ft); over 20,000 assets in distribution
- Over 40 outbound shipping zones with dock doors
- Shipping zones often crowded with fully loaded assets, metal rich and compacted environment

- Solution

- Intellex tags placed on critical assets
- Created “tracking zones” across the 40 shipping areas, also in other key parts of the DC where assets are temporarily placed
- Assets tracked by current and last known location
- Data from readers integrated with DC asset tracking application
- Asset tracking coordinated with outbound shipping



Agriculture Chemical and Supply Company

- Business Challenges

- Supplier to over 200 accounts across Northern CA
- Agricultural chemical, fertilizers, etc. delivered on site to customer locations
- Supplies delivered by equipment such as feeders, spreaders, etc. attached to trailers
- Inaccurate accounting of yard equipment results in delayed shipments and unnecessary new purchases of equipment
- Losing track of equipment in the field - duration, location
- Equipment cost ranges from \$1K to \$25K each

- Solution

- Intellex tags placed on yard equipment
- In-coming and out-going truck lanes covered by readers and antennas
- As equipment leaves yard, data sent to local tracking application
- Equipment is also associated with customer information
- As equipment arrives, data reconciled w/ local tracking application
- Customer expect positive ROI within one planting season (6mos)



Casino Management

- Business Challenges

- Lost or untracked slot machine keys results in a \$15K fine for each occurrence
- Lost keys also result in additional \$15K for replacements and employee cost
- Has had 2 occurrences over last 6 mo at this site alone
- Keys being handled by multiple personnel

- Solution

- Intellex tags placed on key rings
- Employee exits and key cage areas covered by readers/antennas
- Readers integrated with security system including audio and visual alarms, using GPIO
- Tag verified at cage area for operation
- If tag enters/leaves exit areas, visual and audible alarms sounds
- Security office also notified



Other Customer Projects

- Auto Manufacturer
 - Tracking Work-in-Process (WIP) parts
- Auto Dealership
 - Tracking new car inventory and autos in service
- Cruise Line
 - Tracking passenger and crew
- Utilities
 - Tracking field equipment, transformers
- Lab Assets
 - Tracking high value assets such as scopes, spectrum analyzers, etc.
- Dept. of Public Works
 - Tracking asphalt construction equipment



For more info and a FREE
Worldwide RFID UHF Chart goto:

www.intelleflex.com

Thank You

