Barcoding INCORPORATED

No Barcodes? No Problem!

New imaging software easily collects data without barcodes or RFID

Intermec® by Honeywell

Editor

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Jody Costa joined Barcoding, Inc. as Director of Marketing in 2010. With over 10 years of experience in writing, marketing, and publishing, Costa is responsible for all strategic and tactical aspects of the marketing program.

Barcoding, Inc. is a national systems integrator, specializing in the development, deployment, and management of supply chain and mobility systems based on automated data capture and wireless technology. www.barcoding.com.

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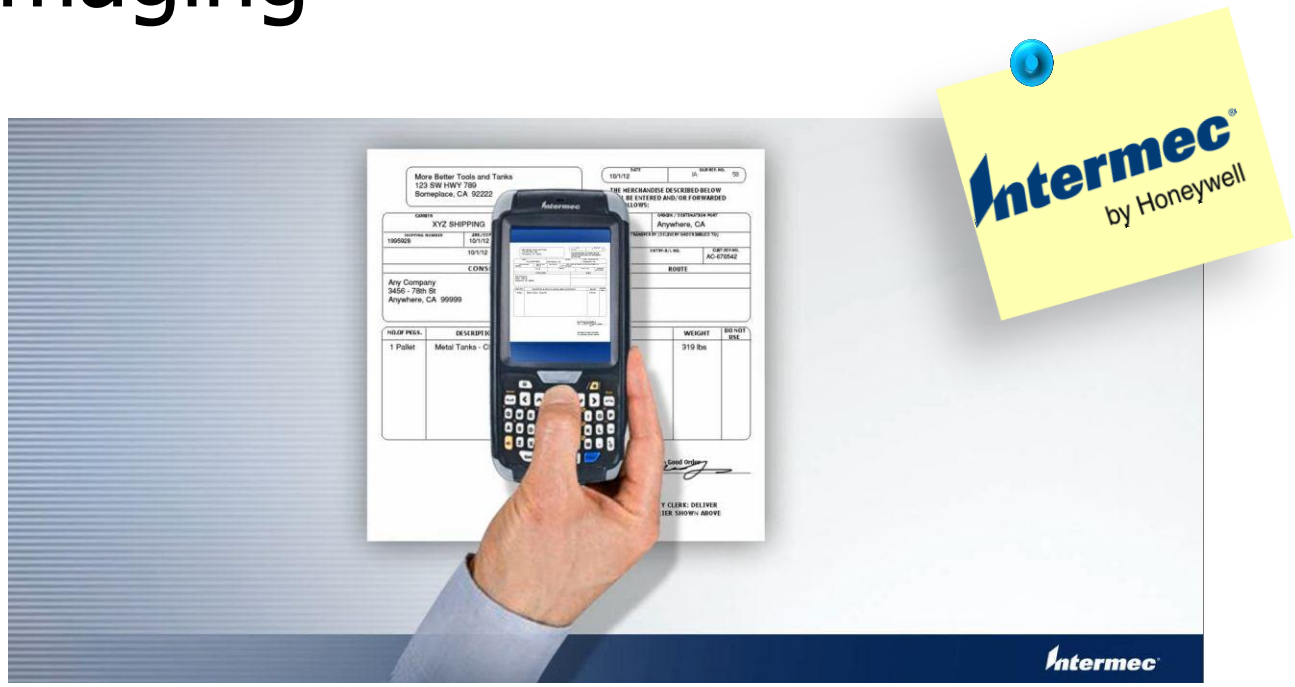
TABLE OF CONTENTS

I. The Development of Mobile Imaging
II. How Imaging Software Works
III. Imaging vs. Barcodes vs. RFID
IV. Opportunities for Imaging
V. Practical Applications
VI. Appendix – Technical Specs

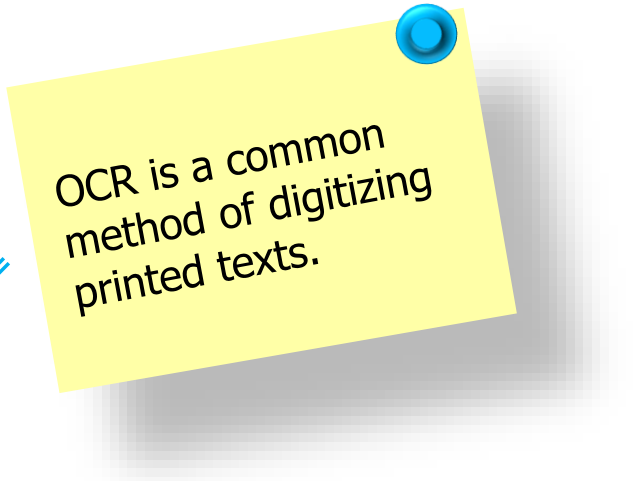
CHAPTER 1:
The Development of Mobile Imaging



No barcodes or RFID …

Some assets just aren't conducive to barcodes or RFID and sometimes traditional ways of collecting information just don't make sense. Because these assets (things like trailers, cargo holders, paper documents, etc.) aren't barcoded, it is widely accepted that they must be tracked manually.

That is, it *was* accepted until the development of mobile imaging software. Let's learn more.



“Imaging is based on Optical Character Recognition or OCR technology.”

OCR is the mechanical or electronic conversion of scanned images of handwritten, typewritten or printed text into machine-encoded text. The technology has been around for decades and is currently supporting things like the Google Books project.

OCR technology developed partly out of the need to handle scanned images of paper documents. Before OCR, data entry teams were employed to read and retype information.[1]

1 – Optical Character Recognition Technology

Taking OCR Mobile

While OCR technology has been available for decades, it isn't capable of solving the "no barcode" problem on its own.

Using imager scan engines EX25 and EA30 in their current mobile solutions, Intermec by Honeywell's imaging software digitizes human readable fonts (minimum of 10pt font) into ASCII data.

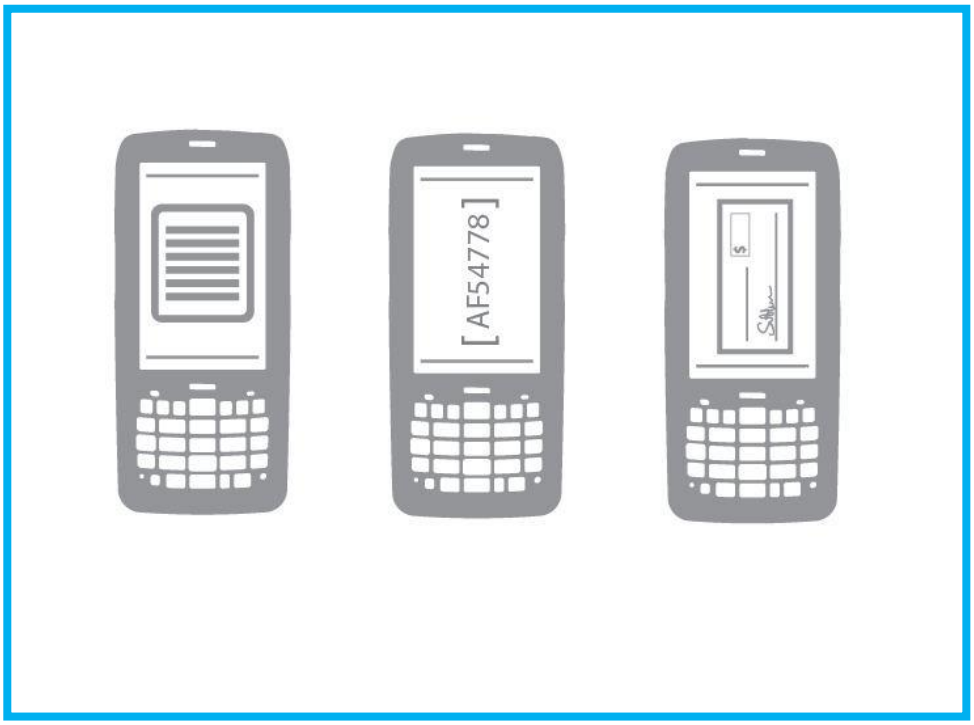
Translated: A combination of OCR technology, powerful imagers embedded in Intermec mobile computers along with mobile computing processing horsepower is what drives this new imaging solution.

"Application-Oriented OCR" or "Customized OCR", and has been applied to OCR of license plates, business cards, invoices, screenshots, ID cards, driver licenses, and automobile manufacturing.[2]

This application-driven approach is the impetus for mobile OCR.

2 – Application specific OCR

CHAPTER 2:
How Imaging Software Works



Digitizing Human-readable Characters

New imaging software solutions (led by Intermec by Honeywell) rapidly read and interpret human-readable character strings in numerous formats, as well as entire blocks of text.

Once scanned, the captured and interpreted data can be easily integrated into line-of-business applications, ensuring that complete and accurate data enters back-end systems.

Like Taking a Picture

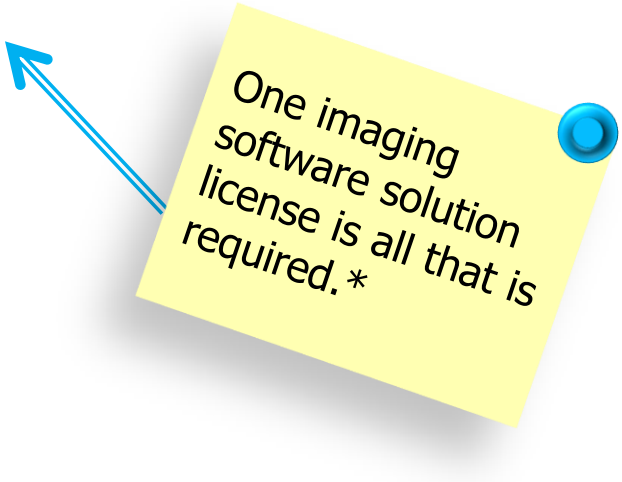
Using imaging software with a mobile computer, your field and mobile workers can capture an image of human-readable characters as easily as scanning a barcode or taking a picture. This becomes particularly valuable for tracking assets in a yard or outdoor setting.

One Imaging License

Even if you're tracking processes require you to capture several different formats of identifiers, only one imaging software license is required on your mobile computer.*

**Offer available from Intermec by Honeywell*

Mobile workers can now automatically capture the data behind human-readable characters without barcodes or RFID.



CHAPTER 3:
Imaging vs. Barcodes vs. RFID

Coexisting with Barcodes

Portions of your operations may already rely on the accuracy and efficiency of traditional barcode scanning or possibly even RFID for keeping track of workflows and assets. Now that we've seen what a powerful imaging software solution can do – let's find out how it compares with and coexists with these existing barcoding or RFID processes.

Automating the rest of the supply chain

Even if you use traditional barcode scanning and/or RFID, you may have items that simply don't make sense to tag, things like documents, re-usable containers, and/or items that get repeatedly sterilized.

Then there are aspects of your supply chain operations that require you to track assets you don't own or that must adhere to a pre-established identification scheme. These assets often have an alpha-numeric serial number painted on them. The assets may even transition to operations that aren't automated and must rely on human-readable identifiers for tracking purposes. This is where mobile imaging comes into play.

Scanning intermodal containers or shipping container codes is just one use of imaging.

> “Imaging provides the same familiar point-and-scan process as barcoding or RFID.”

The Third Pillar of Data Collection

Imaging delivers the accuracy and efficiency of automatic data collection to items that are identified with alpha and numeric character strings with a same familiar point-and-scan process.

When your processes require it, **mobile computers can seamlessly transition** between imaging and reading 1D and 2D barcodes as well as RFID tags.

If you previously ruled out barcodes and RFID as a way to automate data collection, then mobile imaging software is the answer.

Imaging? Or Barcodes? Ask Yourself:

- At some point in its tracking, does the asset or container **need to be read by humans**?
- Do you already have a pre-existing, well-established tracking process in place involving **multiple stakeholders** (think truck trailers)?
- Is the asset or container **exposed to conditions** that would make it difficult to maintain a readable barcode label (long exposure to harsh outdoor conditions, sterilization processes, abrasion)?
- Are your supply chain partners **not willing to invest** in barcode or RFID tags?

If you answered yes – Imaging is your solution!

CHAPTER 4:
Opportunities for Imaging

Humans aren't the most efficient or accurate

Humans aren't always the most accurate and efficient data collectors. You're probably familiar with the old adage about data: garbage in means garbage out. But prior to OCR, human-readable text meant just that – read by humans.

Now with imaging, a mobile computer can read the text without making a mistake – no key entry errors, no illegible handwriting, and no room for creative interpretation.

Invoice Sooner

Imaging gets data into your system faster, speeding up your ability to respond to inquiries from customers and supply-chain partners, and ultimately, enabling you to initiate invoicing sooner.

Gain Efficiencies and Reduce Errors

Imaging is a more efficient process that reduces errors associated with manual key entry and introduces correction capability earlier in your workflow.

Use Humans More Efficiently

By taking manual data collection out of the hands of your workers, you free them up to accomplish higher order tasks for your organization.

Track the Entire Supply Chain

Now with imaging software on mobile computers, organizations can start data collection in areas previously thought untouchable with barcode or RFID. Use imaging to complete your data collection needs.

"Automate the collection of character-based, human-readable data now"

CHAPTER 5:
Practical Applications

Capture Anything

As we've seen, imaging provides opportunities to automate data collection of entities previously tracked via human-readable characters only. Let's take a look at a few examples of how this type of technology is transforming industries.

Mobile Document Imaging (MDI)

MDI is a simple imaging solution for automating driver operations.

MDI enables drivers to extract specific fields of interest on shipping and receiving documents and then to automatically and immediately synchronize it back to the central document management system. Invoice generation can begin right away – accelerating the billing cycle and improving cash flow.

License Plate Verification (LPV)

LPV puts real-time information into the hands of law enforcement and security personnel when and where they need it.

LPV provides nearly instantaneous look-up capabilities to enable field personnel to do their jobs better and faster.

Imaging for the Real World

Scanning Shipping Container Codes »

A shipping company believed they couldn't automate their weekly collection of 7,000 shipping container codes because half of them were vertically oriented. Now, their "walkers" are on a roll.

VIN Scanning in Ports »

VIN scanning brought man-hour savings to this shipping company responsible for processing new vehicles that enter and exit their local port by way of ships, trains, and trucks.

Imaging for the Real World

Trailer Scanning for Yard Management »

A large retailer resolved issues associated with its manual recording process of trailer numbers. Considerable man-hour savings and improved trailer number recording accuracy estimated.

Airline Cargo Container (ULD) Scanning »

Scanning air cargo containers (ULD) helped this air cargo company reduce their error prone manual key entry and increase processing efficiencies.

The Future is Already Here…

- Barcodes or RFID aren't always necessary for data collection.
- With a minimum 10 point font, any character-based data set can be digitized.
- Mobile workers can transition from imaging to barcodes to RFID seamlessly – all with one device.
- With imaging, data collection is now available for every aspect of your supply chain.

How Will You Use Imaging Technology?

Challenge Us!

Where do you want to use imaging in your supply chain?

Is imaging software right for your organization?

Find out more today by contacting one of the professionals at Barcoding, Inc. – leader in data capture solutions.

Contact Barcoding, Inc. to get started.

Appendix – Technical Specs

General Operating Specifications for all Application Use Cases

- Full support for Intermec mobile computers and scanners with the EA30/31 and EX25 imagers
- Supported Operating System: Windows Embedded Handheld 6.5
- License required to activate software for commercial use

Recommend Hardware by Application Use Case

	Intermec Mobile Computer or Scanner	CK3X	CK71	CK70	CN50	CN51	CN70	SG20	SR61
	Imager Engine(s)	EX25, EA30 Camera	EX25, EA30, Camera	EA30 Camera	EA21*	EA30, EA31 Camera	EA30 Camera	EA30, EA31	EA30, EA31, EX25
APPLICATION USE CASES	Mobile Document Imaging (MDI)	•	•	•	•	•	•	•	•
	Shipment Address Verification (SAV)	•	•	•		•	•	•	•
	Remote Deposit Capture (RDC)	•	•	•	•	•	•	•	•
	License Plate Verification (LPV)	•	•	•		•	•	•	•
	Vehicle Identification (VIN)	•	•	•		•	•	•	•
	Unit Load Device (ULD)	•	•						•
	Container Label Scanning (CLS)	•	•						•
	Trailer ID (TID)	•	•						•

**Support for Intermec mobile computers and scanners with the EA21 by request only.*