



## Smartphones Image DataMatrix Barcodes




ScoringSystem's DataMatrix barcode can be scanned with a camera phone and then a product or persons record will be displayed via the internet where you stand.

This technology can be used in the food industry, for equipment and maintenance records of machinery, to create secure membership identification cards, ect.




ScoringSystem's databank barcode printed from the page of records onto packaging, a reflector stake and tractor.



### **“Smartphones” Image DataMatrix Barcodes, Access Site-Specific Records in Real Time**

Leading-edge wireless technology, in conjunction with 2D DataMatrix barcodes, now enables access of Web-based site-specific records in real time at the location where data is actually collected.

Throughout the food supply chain, a variety of products undergo a highly organized sequence of processing stages by a number of companies and individuals at specific locations during time periods ranging from a few days to many years. At these locations, identified by their registered PIDCs (Premises ID Codes), all types of entities and products are born, bred, planted, raised, fed, harvested, transported, processed, packaged, sold, etc.

In order to track these stages properly, from Point-to-Point each location and each item must be positively identified and labeled to allow the collection, storage, and reporting of critical processing data. One method of labeling locations and products, so that data may be collected and retrieved easily, involves using a 2D barcode known as the DataMatrix. The barcode graphically encodes a Web page's url (Internet address), and the barcode's image is printed on the attached to the product or associated with a location.

Using the photographic imaging capability of a Symbian Series 60 “smartphone,” such as the Nokia 6600/7610, the DataMatrix barcode is captured; and a special program, called Semacode, interprets it in real time. The program transfers the decoded Web page's url to the phone's Web browser, and the Web page is retrieved via the phone's Internet interconnection and displayed on the phone's screen (organized in RSS, or reduced screen size, by the phone's browser, such as Opera or some other Series 60 “smartphone” browser).

Wireless technology, Series 60 “smartphones,” such as the Nokia 6600, and other handheld portable computers and PDAs, have made collection and display of real time process data an affordable reality in a great number of applications. Devices such as these are becoming more available and in common usage every day; and, as long as these devices have high-resolution capability, the proper software, and an Internet connection, they can be the best way to link locations, products, and process activities in real time and provide security in the nation's food supply and other areas of vital public interest.



In one application, a site marker would have a label attached with a DataMatrix 2D barcode printed on it. The data encoded in the barcode would represent the Internet address (url) for the Web page containing the site record corresponding to that site marker. Imaging the DataMatrix barcode with a properly equipped “smartphone” would display the site’s Web page. The site’s history (crops planted, fertilizer / pesticide / herbicide treatments, crops harvested, livestock grazed, etc.) could then be edited, reviewed or collected – in real time – by a qualified operator (with access secured by proper login).

In a similar application, a label with a DataMatrix barcode could be attached to a product (or any of its sources or ingredients) at various production stages to access Web pages that store and report the product’s processing history. This same method of labeling for tracking and reporting would be applicable and highly useful in collecting and maintaining the historical records on machinery, equipment, and vehicles of all kinds and types.

The same technology could be applied to ensure security in other situations as well, such as: photo ID ticketing and admission to high-profile, highly-valued events (sports, entertainment, conferences, exhibitions, etc.); photo ID member cards for sports players, team managers, coaches, trainers, and officials; specialized photo ID cards and documents for registration and control of individuals (employees, contract workers, students) and other high-value assets (thoroughbred horses, companion animals, antiques, paintings, etc.).

Combining the unique character of the 2D DataMatrix barcode and the present wireless technology in these applications makes it possible to use the full capability of ScoringSystem’s Internet-based databank for positive, real-time, site-specific tracking and tracing. The DataMatrix and other 2D barcodes (such as the PDF417) are only one type of labeling technology available for many applications. Other types, such as RFID and color-coded imaging, are equally applicable in particular situations (such as, ear-tagging livestock and mass-quantity warehouse container inventory control). These applications each require their own specialized interfaces that, eventually, will become as affordable and as commonly available as the imaging-capable “smartphone.”

Regardless of the data-collection and reporting technology applied, the “bottom line” is this: location identification (PIDC), product labeling (barcode, EPC – electronic product code – or other), and collecting / maintaining processing information in real time requires an Internet databank – ScoringSystem’s databank – where the owner of the data can be assured of reliable, dependable, accessible storage with appropriate levels of privacy and confidentiality. Without such a databank, labeling and collecting data is just a frivolous exercise.

Phones that currently support this technology (as of October 2004):

Nokia 7610/7650 Sendo X

Nokia 6600/6620 Siemens SX1

Nokia 3650/3600/3620 Sony Ericsson P900/P910