

# Protecting Democratic Elections

## Using: Counter-Fight



Presented by: Cryptocodex Ltd.

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# PEOPLE WILL COUNTERFEIT ANY PRODUCT...

## Just For Money...



Fashion



Cellular Phones & Accessories



Food



Documents



Cosmetics



Medicines & Food Additives



Pets



Alcoholic Drinks

Aviation Parts



Car Parts



Military Parts



Technical Parts



# The Encryption Technique

- Cryptpcpdx holds the exclusive rights of a unique encryption algorithm
  - The algorithm is 'CHAOTIC', non-mathematical
  - The KEY is a PHR (Pure Human Random) type
- The resulting encryption is of extreme strength
- Experts attempts to 'break' it - failed
- The technique was registered as an international patent, presently at its pending stage

- The 'data' in the bottle is encrypted
- Becomes meaningful only to the key owner.
- Data size is maintained.

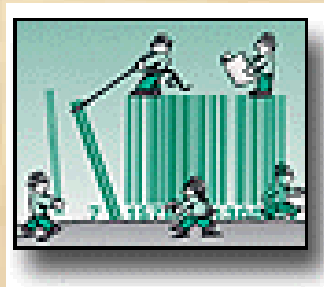


- **The only technique to fit on a barcode**



# The BARCODE Technology

- The Barcode Technology is widely used in industrial and commercial applications
- Label printing costs are negligible
- Scanning and reading hardware is reasonably priced
- A 2-D barcode can maintain hundreds of characters



# Reading 2D-Barcodes

Using available home & office equipment

- Desktop Scanner



Or a dedicated scanner...



- WebCam



- Cellular Phone

- Barcode Reader



- Hand-Hand Terminal



# Original Voting Note

Original voter's details are encrypted in the 2D-Barcode

בחירות לרשויות המקומיות  
11.11.08  
תשס"ט

תשולת:  
משרד המסים  
ת"ד 4136  
יירוטלים 91261

תל-אביב-יפו  
שולם  
7003

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שם משפחה	שם פרטי	שם סנדור בקלפי

שם משפחה: Berger  
שם פרטי: Denis

שם רחוב: 34987  
ח'פה: 51  
מס' בית: 11

שם רחוב: 34987  
ח'פה: 51  
מס' בית: 11

לשימוש חוזר:  
לא ידוע  
אם  
שמן נטול מסים  
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אחד

מתחם גנים  
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ח'פה

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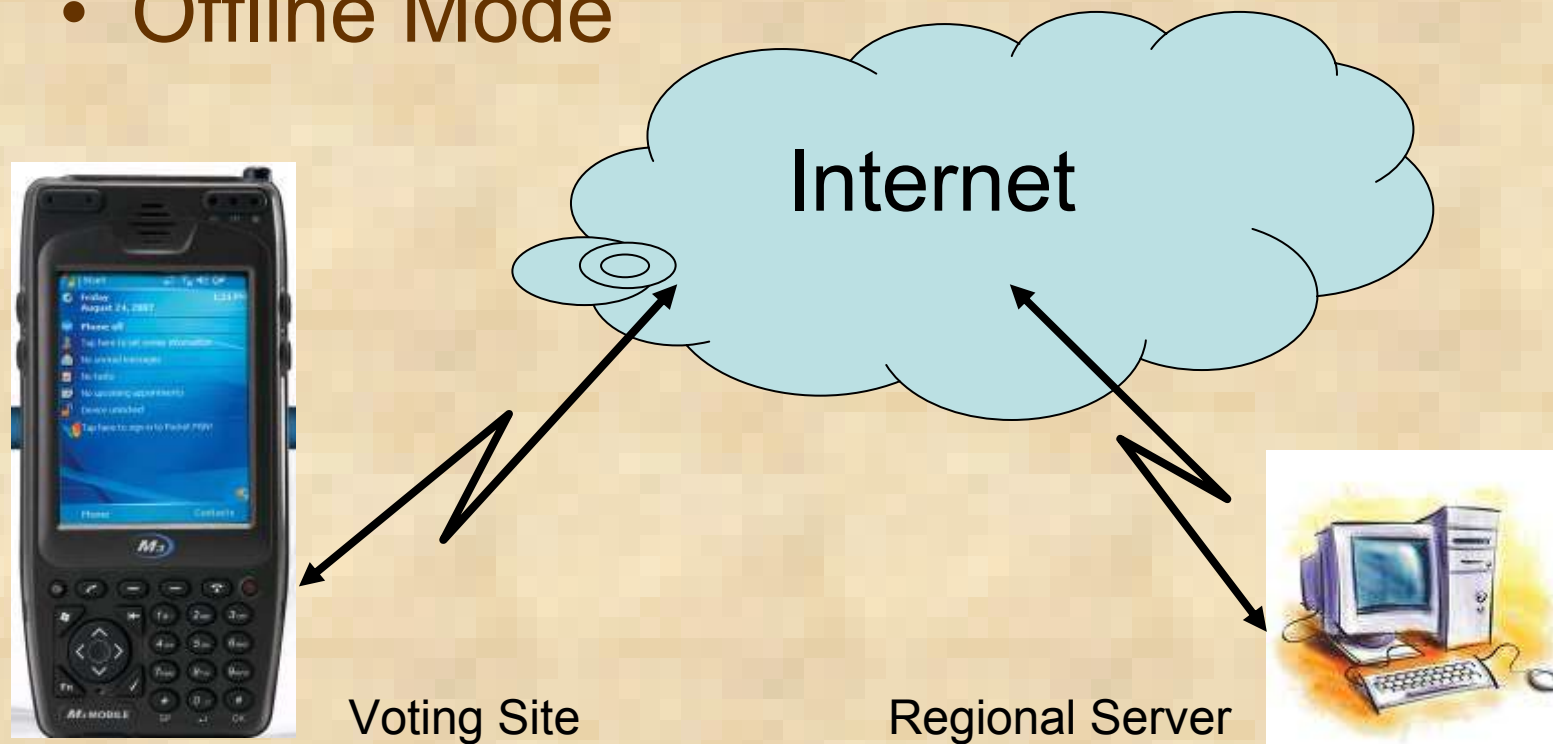
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# Verification Modes

Two modes of operation are available:

- Online Mode - Using a communication link
- Offline Mode



# Online Mode

- The system uses a GPRS Internet access
- Barcode is transmitted to a server, where it is decrypted, using the relevant key
- Multiple servers, in multiple authentication sites can be used – to avoid peak data traffic load
- Pictures, in high quality, reside in the server
- A pointer, derived from the barcode content, retrieves the relevant picture
- Picture is encrypted, pointer is meaningless and random – thus no connection exists between the voters and their relevant pictures



# Offline Mode

If online mode is not desired, or if the communication link fails due to peak data load – an offline mode is available

- Textual data is decrypted locally
- A secondary barcode, holds a super compressed picture, enables peak hours service



