INFORMATION & COMMUNICATION TECHNOLOGY
IN

DISTRICT JUDICIARY

By:

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<u>It is said:</u>

Law is like a hindu wife, who walks 10 steps behind the preperator of crime.

We have to change this notion and prepare ourselves to face the technological challenges.

OPPORTUNITY TO CHANGE

People have a stereo-typed view about District Courts being slow, rigid and secretive.

Information & Communication Technology can help us change this impression and Courts can became more efficient, fast, responsible and user friendly.

Stakeholders in Courts

1. Judges
2. Litigants
3. Lawyers
4. Court Staff
5. General Public
6. Government

INFORMATION & COMMUNICATION TECHNOLOGY IMPLEMENTATION

➢ Information & Communication Technology is available for various uses in District Judiciary and allied areas and in some of the District Courts it is already in operation.

➢ Information & Communication Technology implementation in District Courts is possible in the areas mentioned hereinafter.

Video-Conferencing

Technique

➤ Court is connected to the Jail by ISDN Lines and at both the ends a camera unit and a display unit like, 29" TV Screen is provided with recording facility at the Court's end.

➤ Under-trial is produced at the Jail end. The Judge, Lawyers and witnesses etc. remain present in the Court and regular trial is conducted.

➤ The judicial remand of the under-trial can also be extended without physically producing him in Court.

A Model Video Conferencing Court

Video-Conferencing

Benefits

- Dreaded criminals can be tried without risk

- Trial is expedited with use of this facility

- Cost and manpower in producing undertrials only for remand extension can be saved

- Multiple trials of an accused lodged in one jail is possible in different states

- Evidence of witnesses unable to come to Court can be recorded

- In child sexual offences, minor witness can be screened from the accused by use of this facility

Video-Conferencing

<u>Practical Aspects</u>

- Judicial remand extension of undertrials is already done in Delhi, Hyderabad & Bangalore

- Trial of Accused Telgi lodged in Pune Jail is conducted simultaneously in most of the states by using video conferencing facility

- Possibility of recording evidence of Bharti Yadav in Nitish Katara murder case is being explored

Data Management

Technique

- Data is captured at the filing stage in computers for new cases

- Data of old cases is fed in computers using dedicated manpower

- Data relates to date of filing, full description of parties, law provision invoked, property no., detail of witnesses, stage of trial, next date of hearing and advocate's name etc.

- Data is updated on daily basis without fail

Data Server Room

Data Management

Benefits

- Cause-lists can be generated at the press of the button
- Periodical statements can be easily generated
- Cause-diary can be prepared as per set norms
- Automatic marking of cases is possible
- Age-wise / category-wise segregation of cases is possible

Data Management

Practical Aspect

- Automatic marking of cases is functional in Hon'ble Supreme Court of India

- Almost all the High Courts and some District Courts are maintaining upto date data-banks and preparing automatic cause-lists

- Party name-wise, case number-wise, Act-wise searches are possible on these data-banks

Docket-Management

Technique

- Files are given unique ID numbers
- The unique IDs may be printed, bar-coded or embedded in an RFID tag
- RFID / Bar-Coded Readers can be installed at strategic points
- Active / In-active RFID tags can be used to identify the files

ACTIVE RFID TAG

Docket-Management

Benefits

➢ Movement of the file can be easily tracked

➢ Record – Keeper can immediately trace a file lying in a storage bin or in an almirah

➢ Theft of files can be prevented

➢ Repeated labour of entering the file details in all documents is not required
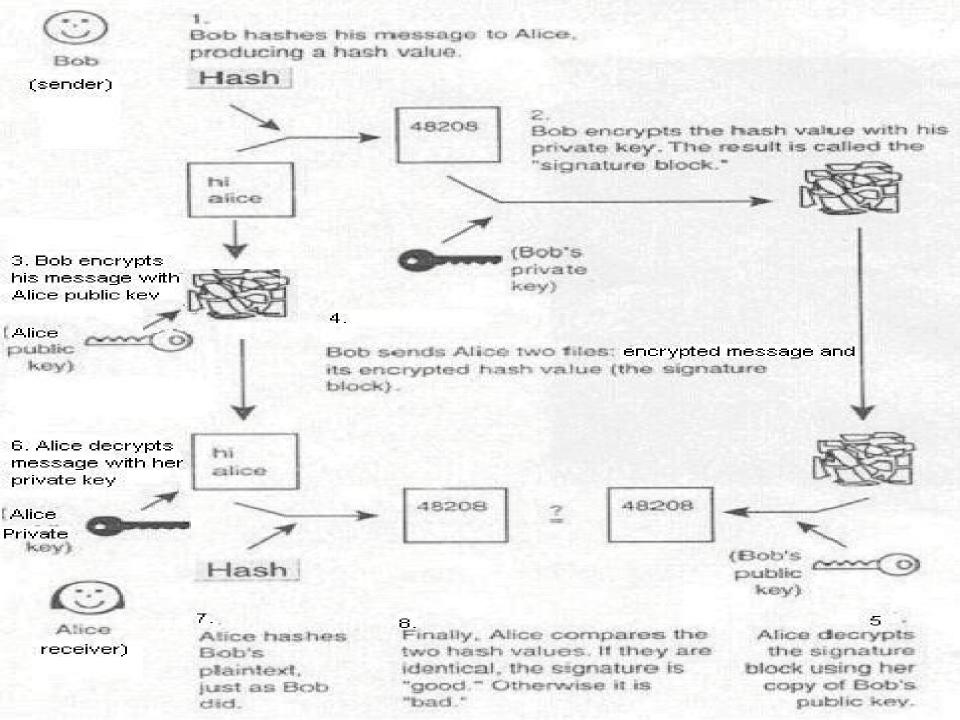
➢ RFID tags are re-useable

Docket-Management

Practical Aspects

➢ Modern Libraries in Courts are already using Bar-Code facility for identifying the books

➢ Unique IDs are generated for all files in software developed by NIC for different Courts

➢ RFID tags are the latest concept which are used by shopping malls to prevent theft of articles

Digital Signatures

Technique

- The data to be sent through internet / e-mail is encrypted by using the digital signature card provided by the Service Provider

- The said data is then sent to the receiver through e-mail / internet in encrypted format

- The receiver decrypts the data by using the verifier software provided by the Service Provider

Bob
(sender)

1.
Bob hashes his message to Alice,
producing a hash value.

Hash

48208

2.
Bob encrypts the hash value with his
private key. The result is called the
"signature block."

hi
alice

(Bob's
private
key)

**3. Bob encrypts
his message with
Alice public key**

(Alice
public
key)

4.
Bob sends Alice two files: encrypted message and
its encrypted hash value (the signature
block).

**6. Alice decrypts
message with her
private key**

hi
alice

(Alice
Private
key)

48208 ? 48208

Hash

(Bob's
public
key)

Alice
receiver)

7.
Alice hashes
Bob's
plaintext,
just as Bob
did.

8.
Finally, Alice compares the
two hash values. If they are
identical, the signature is
"good." Otherwise it is
"bad."

5.
Alice decrypts
the signature
block using her
copy of Bob's
public key.

Digital Signatures

Benefits

- The communication can become 100% safe by using digital signatures

- Release warrants can be sent from Courts to Jails within minutes of the passing of the order

- Certified copies can be immediately issued by the copying branch as soon as the order is digitally signed

- Incidents like release of Sher Singh Rana from Tihar Jail on the basis of forged release warrants can be avoided

Digital Signatures

Practical Aspects

➢ In High Court of Delhi judgements are digitally signed side by side with physical signatures

➢ Digital signatures have been issued to few Judges in District Courts of Delhi on experimental basis

➢ Digital Signatures will be available to all the Judges in Delhi District Courts soon

➢ Tihar Jail officers are also in the process of getting digital signatures

Web-Sites

Technique

➢ Every District Court can have its own website giving information like, location, jurisdiction, cause-lists, judgments and facilities for litigants etc.

➢ Website can be hosted at the servers of NIC

➢ Data-bank of the Court is to be linked through high-speed lines with NIC Headquarters

➢ Website is to be updated on daily basis

Indian courts

indian courts

India image

Contact Address

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ational Informatics Centre,
inistry Of Communications and Information
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ew Delhi - 110 003, INDIA.
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Cause list

Causelists are scheduling of cases to be heard by the courts on the following day. TheCauselists of Supreme Court and 16 High Courts are available on the Web. An advocate can generate his/her own Causelist.

more...

[Allahabad ▼] [Go]

JUDIS

The Judgement Information System (JUDIS) consists of complete text of all reported judgements of Supreme Court of India from 1950 to till date. The Judgements of the High Courts of Delhi, A.P, J & K and Orissa are also available on free of charge basis on the web.

more...

[Supreme Court ▼] [Go]

INDIACODE

All acts of Parliament from 1834 onwards, as applicable today are available on the Web in retrievable form.

more...

Court Websites

Supreme Court Rules', Photographs of ex & Sitting judges with Bio-data, Calendar, etc. Delhi High Court: Consists of History, Jurisdiction

[ALLAHABAD ▼] [Go]

Daily Orders

The daily orders of Supreme Court of India and Delhi High Court are available on the web within 24 hours of their delivery in the court.
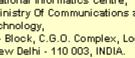
more...

[SC ▼] [Go]

COURTNIC

Provides Supreme Court of India's case status information. It also provides the text of the latest order of the court.

more...

Web-Sites

Benefits

➢ Upto date information is available to the lawyers and litigants

➢ Availability of current cause-lists, orders and judgements on internet free of cost

➢ Transparency in the functioning of Courts

➢ Faith of the public in judiciary is reinforced

➢ Online inquiries can be made

Web-Sites
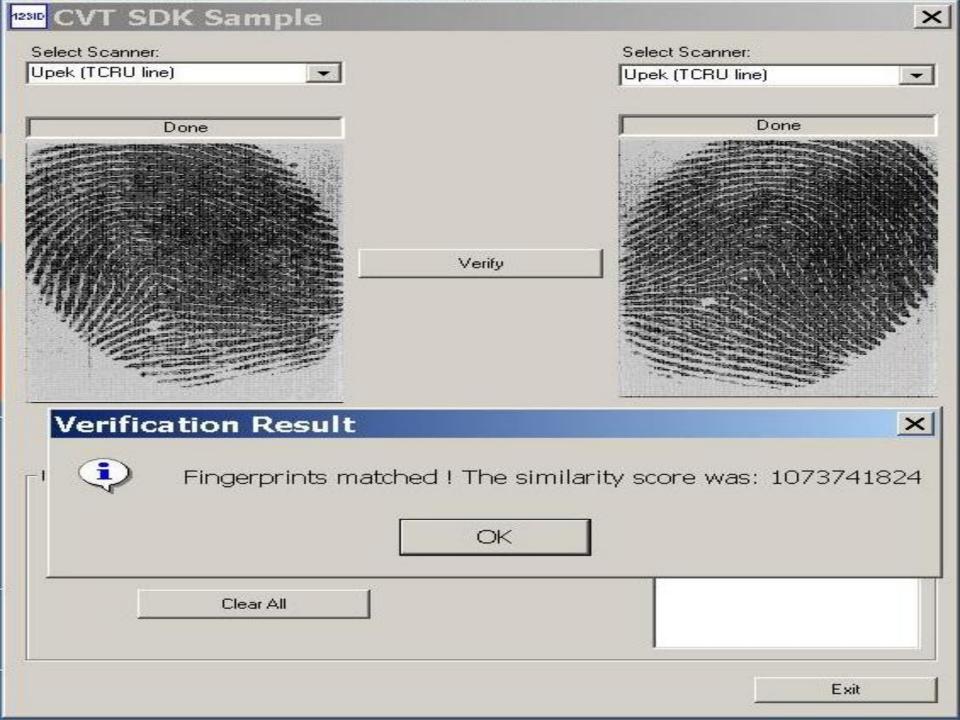
Practical Aspects

➢ Supreme Court and most of the High Courts already have their websites

➢ For District Courts a beginning has been already made in Delhi www.delhicourts.nic.in

➢ Some other Districts like Kanpur Dehat, Bilaspur and Etawah (U.P.) have also made some progress

Biometric Identification

Technique

- Biometric Readers are available in the market which can be installed with Court Computers

- Biometric Profiles of the accused, sureties, witnesses and other Court users are to be prepared and kept in an online Data-bank

- A person has to put his finger on the Biometric Reader to identify him and his entire history can be retrieved

Biometric Identification

Benefits

➤ The accused, who give different name at the time of his subsequent arrest can be easily identified

➤ People who stand sureties for number of accused by assuming false identities can be trapped

➤ Stock witnesses who are in the habit of giving evidence in number of cases can be pin-pointed

➤ No wrong person can be released from prison due to confusion of identity

Biometric Identification

Practical Aspects

➢ Tihar Jail has already installed the necessary machines for Biometric identification of accused and Police personnel escorting them to Courts

➢ Studies are being conducted to adopt Biometric Identification technology in District Courts of Delhi

Personnel Management System

Technique

- Automatic contact less attendance marking machines & accompanying software is to be used for attendance of staff

- Salary preparation software is to be used in conjunction with the attendance marking system

- Data-bank of the details of the staff   alongwith their present posting is to be prepared

File   Edit   Options   Help

topaz

Payroll
EDIS Extract
Personnel

Personnel Details

Personnel no.	Surname	Preferred Name	Payroll	Division	Department
68	Burke	Edwin	TOPW	SOUTH	ADMIN
7	Chahal	Rajbinder	TOPW	NORTH	ADMIN
8	Cobbles	Sally	TOPW	NORTH	PAY
2	Collinns	Phil	TOPW	SOUTH	PAINT

Select
Filter
Exit

Tabs: Personal | Next of Kin | Education | Quals | Skills | Training | Jobs | Contract | Pension | Issues | Access | Service

Side tabs: Personal 1 | Personal 2 | Address | Driving | Medical

Field	Value
Title	Miss
Surname	Chahal
First Forename	Rajbinder
Second Forename	Doreen
Third Forename	Sally
Preferred Name	Rajbinder
Salutation	
Previous Surname	
Date of Birth	09/11/1973 29 Yrs 7 Mths
Expected Retirement	
Service Start Date	01/01/1996 7 Yrs 6 Mths

Date Start   01/01/1996
Date Left
NI Number   NN787827X

Field	Value
Job Reference	Admngl
EE Status	Live
Payroll Status	Live

Controls

Analysis
Photograph
Document

Create
Delete
Query

Confirm
Cancel
Exit

Left navigation icons: PersonnelSetup, Personnel, Diary, Skills Matrix, Recruitment, Course Detail

T & A
Expenses
P11D's
SRS
System Admin
Exit

Personnel Management System

Benefits

➤ Tendency of the staff to come late to Court is curbed

➤ Warning letters and reports are generated automatically

➤ Salary bills & Salary slips are automatically prepared by computers

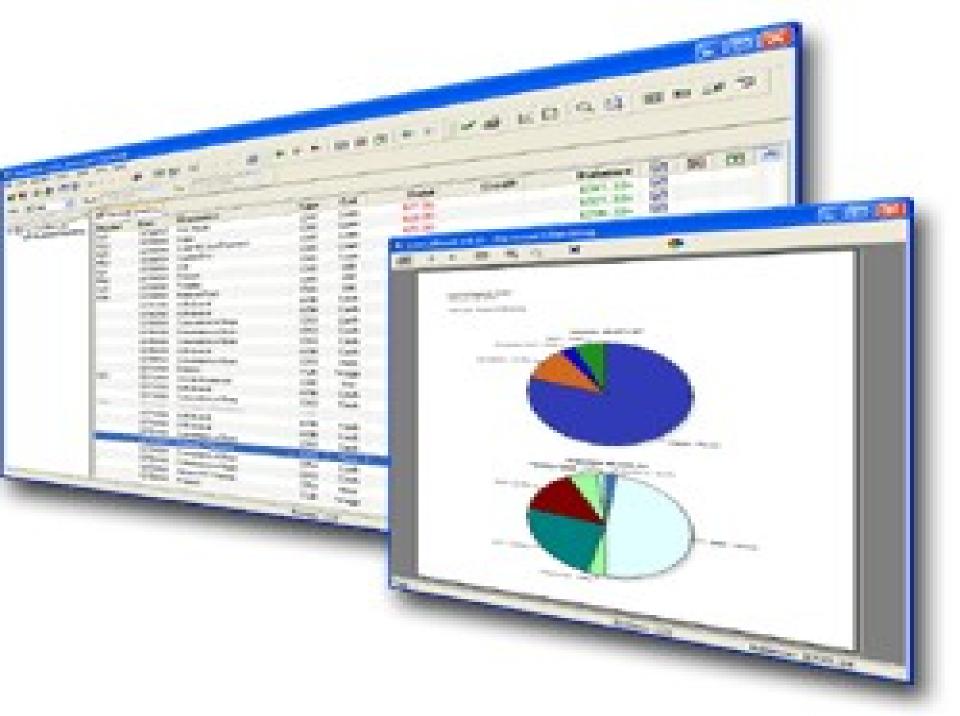➤ Transfers/Postings can be made with ease

Personnel Management System

<u>Practical Aspects</u>

➢ The Central Government & many State Governments have already implemented the Personnel Management System for their staff

➢ Most of the big private organisations are effectively using this software

➢ District Courts have also realised the utility of the Personnel Systems and are taking steps to put them in place

Financial Package Software

Technique

➢ A specially developed financial package software for Courts is available with NIC

➢ The package takes care of calculation of Court-fee, collection of fine, deposit of rent, witness expenses, certified copy charges and preparation of treasury release vouchers

➢ The software runs in conjunction with the main application software of NIC

Financial Package Software

Benefits

- Calculation of the Court fee and other charges has become very easy

- Proper cash receipts are issued to the litigants / lawyers

- Due to online transparency, chances of corruption are minimum

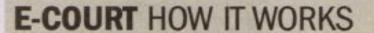- Periodical financial statements like budget can be generated easily

Financial Package Software

Practical Aspects

- In Delhi the financial package is already in use
- Similar finance packages are being used successfully by Public Sector Banks and MNCs
- No special training is required to run this package
- It is compatible with the Government Treasury Software, so it can be easily integrated with it

E-Courts

Technique

➢ Paper-less Courts

➢ Audio-visual presentation facility

➢ Video-conferencing facility

➢ Lawyers can bring their own Laptops

➢ Automatic recording of evidence

➢ Modeled on the pattern of Court-21 of USA

➢ Existing files- Scan & OCR Software to be used

Overview of Integrated E-courts

E-COURT HOW IT WORKS

SOUND recorded digitally and transmitted to external transcribers. Electronic transcript is uploaded by courtbook via extranet.

LIMITED DOCUMENT STORAGE available and courtroom printer accessible to Judge and Associate.

ASSOCIATE controls display devices using a touch-screen interface. A PC is used to display documents to the LCD screens in the courtroom.

JUDGE has access to own computer as well as court display. Can annotate transcript and documents.

REMOTE MONITORING of courtroom achieved via video link allows single engineer to monitor five courtrooms. CCTV cameras in front and rear courtroom.

WITNESS PREPARATION room fully networked to courtroom and party networks.

COUNSEL view documents on LCD screen, and can use PC to navigate independent of court display. Switch on bench allows user to change between court view and private view of database.

PARTIES, EXTERNAL TO COURT in own offices access courtbook via the internet.

PARTIES access own firm's network VPN solution.

LCD SCREENS on bench show court view. Keyboard and mouse control PCs which are located in equipment room.

AUDIOVISUAL DEVICES such as DVD player, video player, CD/tape player, document camera, video-conferencing — all controlled from a single touch-screen interface.

WITNESS views document on LCD screen, and can use cordless mouse to point on display.

FIREWALLS Segregate judicial, parties', courtroom and extranet networks.

EQUIPMENT ROOM is the central nervous system. Domino application servers, courtroom PCs, firewalls, network switches, audiovisual matrix switches, digital recording system, smart mixers.

PLASMA SCREENS and video camera for communication with remote witnesses.

SOURCE: WA DEPARTMENT OF JUSTICE

E-Courts

Benefits

- Record of Court can be stored on few DVDs
- Immediate retrieval of record is possible
- Physical Barriers are broken
- Accurate record of evidence takes place
- Visual animations & presentation of Arguments
- Internet Aids are available for citations & research
- Real time monitoring of cases is possible
- Congenial and comfortable atmosphere increases efficiency

E-Courts

Practical Aspects

- Already exist in USA, Europe & Australia
- Still at conceptual stage in India
- To be modeled on the pattern of Court 21 of USA
- Training of Judges is required to use this technology
- IT Professionals, Judges, Architects Co-ordination
- Dedicated Staff to be trained
- E-Filing of Cases to be introduced simultaneously

E-Filing of Cases

Technique

➢ Simultaneous filing of Soft & Hard Copies of Pleadings

➢ Filing can be done on Internet or on the Facilitation Centre on CDs or Floppies

➢ Dedicated Server to be provided for E-Filing

➢ Combination of E-Pleadings, Computer order-sheets, evidence and Judgements = Digitized Record

➢ E-Summons + E-Plaint = Complete Summons

➢ Technology available for E-Service of Summons

E-Filing of Cases

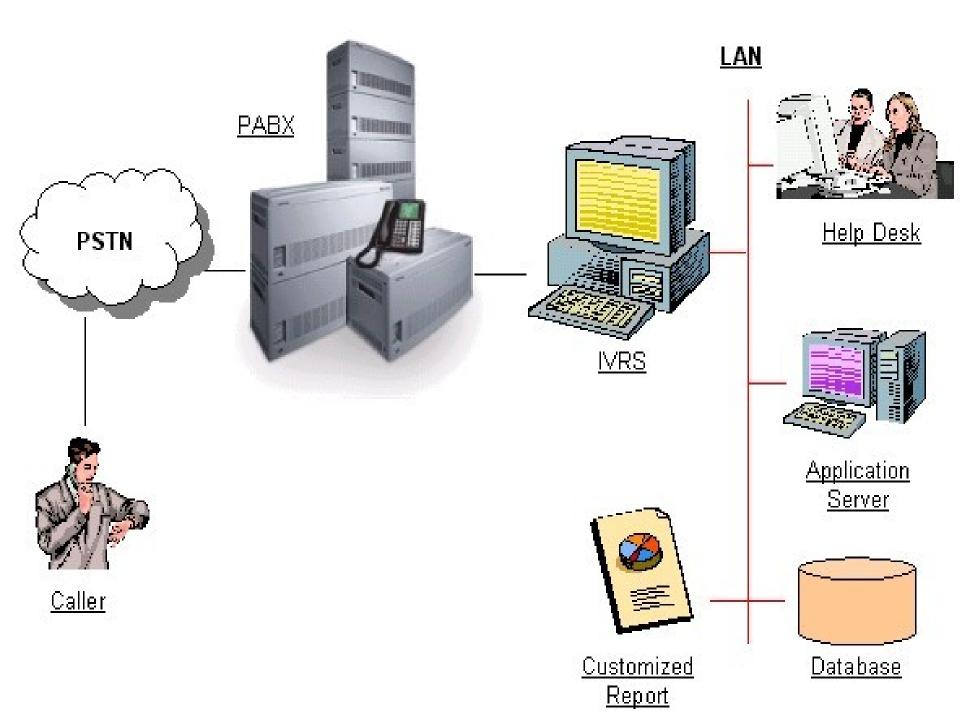# E-Filing of Cases

Benefits

- Digitization of Records
- Full utilisation of E-Courts is Possible
- Immediate service of E-Summons
- Convenience of filing from Home/Office
- Cost of maintaining paper files saved
- No chances of misplacing of files
- Trials will be expedited

E-Filing of Cases

Practical Aspect

- Wide-spread use all over US & Europe

- Supreme Court E-Filing Module is ready

- District Court E-Filing Module will be ready by the year-end

- High Court Rules to be amended accordingly

- Staff, Judges and Lawyers to be trained

- Lawyers to be given licenses to file E-Cases

IVRS & SMS FACILITY

Technique

- Unique combination of Information Technology & Communication Technology

- Data-Bank to be integrated with Mobile Phone Service Provider's System

- Minute to Minute updation of Proxy Server

- Progress & Status of pending cases to be available on voice enquiry via IVRS

- Automatic SMS response system to give details of cases on the basis of case ID

PABX

PSTN

LAN

Help Desk

IVRS

Application Server

Caller

Customized Report

Database

IVRS & SMS FACILITY

Benefits

- People without access to computers can also enquire about their cases

- Immediate response to the enquiries 24 X 7 X 365

- Even illiterates can come to know the fate of their cases

- Accurate information will be available

- It will bring transparency to the judicial system

- No need to come to Court Complex to make enquiries

IVRS & SMS FACILITY

Practical Aspects

➢ IVRS is already operational in Supreme Court

➢ SMS facility is being tested in Delhi District Courts

➢ Some service providers are showing keen interest in this value-added service

➢ Minute-to Minute Cause List on Mobile Phone is at the designing stage

➢ Europe and US are lagging behind in this field

Touch Screen Enquiry Kiosks

Technique

- Technology similar to Bank ATMs
- A proxy Databank Server is to be dedicated
- Broadband or Satellite Communication is to be used to connect Kiosk to Databank
- Kiosks in Facilitation Centres in Court Complexes and remote blocks/villages
- Tie-ups are possible with Banks having ATMs

Touch Screen Enquiry Kiosks
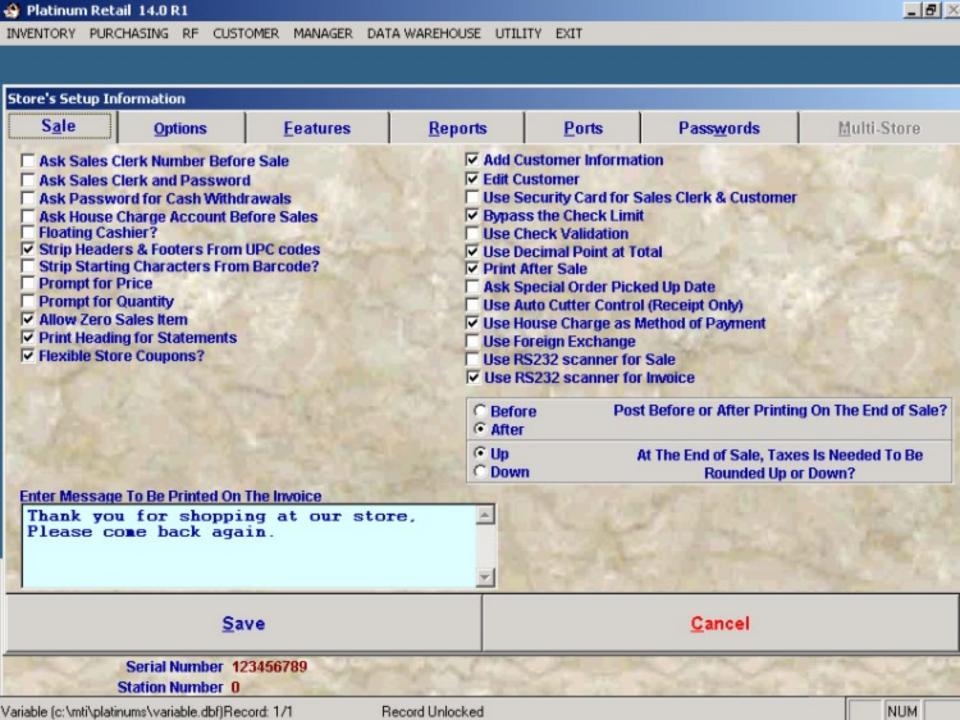
<u>Benefits</u>

➢ Decongestion of Courts

➢ Less requirement of staff in facilitation centers

➢ Kiosks can be put up in different locations so people will get information near to their homes

➢ Litigants will save cost and time

Touch Screen Enquiry Kiosks

Practical Aspects

- Village Resource Centers are coming up in villages of District Sultanpur & Raibreli (U.P)

- Budget for E-Kiosks has been provided in current year in Delhi District Courts

- Banks and other companies are already providing various services apart from banking by using touch screen Kiosks

Store Management

Technique

➢ Software for management of Court Stores is available with NIC

➢ Initially all the items purchased and maintained in stock are to be entered in the software

➢ All the items have to be assigned different codes so that in future, their names are not to be typed again

INVENTORY   PURCHASING   RF   CUSTOMER   MANAGER   DATA WAREHOUSE   UTILITY   EXIT

Store's Setup Information

| Sale | Options | Features | Reports | Ports | Passwords | Multi-Store |

☐ Ask Sales Clerk Number Before Sale
☐ Ask Sales Clerk and Password
☐ Ask Password for Cash Withdrawals
☐ Ask House Charge Account Before Sales
☐ Floating Cashier?
☑ Strip Headers & Footers From UPC codes
☐ Strip Starting Characters From Barcode?
☐ Prompt for Price
☐ Prompt for Quantity
☑ Allow Zero Sales Item
☑ Print Heading for Statements
☑ Flexible Store Coupons?

☑ Add Customer Information
☑ Edit Customer
☐ Use Security Card for Sales Clerk & Customer
☑ Bypass the Check Limit
☐ Use Check Validation
☑ Use Decimal Point at Total
☑ Print After Sale
☐ Ask Special Order Picked Up Date
☐ Use Auto Cutter Control (Receipt Only)
☑ Use House Charge as Method of Payment
☐ Use Foreign Exchange
☐ Use RS232 scanner for Sale
☑ Use RS232 scanner for Invoice

○ Before   **Post Before or After Printing On The End of Sale?**
◉ After

◉ Up   **At The End of Sale, Taxes Is Needed To Be**
○ Down   **Rounded Up or Down?**

Enter Message To Be Printed On The Invoice

Thank you for shopping at our store,
Please come back again.

| **Save** | **Cancel** |

Serial Number 123456789
Station Number 0

Store Management

Benefits

➢ All the store items are accounted for

➢ Pilferage of store items can be curtailed

➢ The software automatically indicates the level at which order for purchasing new store items is to be placed

➢ Distribution as per set parameters in different Court Complexes and riplenishment of stock can take place easily

Store Management

Practical Aspects

- Stores Management Software is being used in many High Courts as well as District Courts in Delhi

- It has streamlined the stores department and entire process has been automated

- Similar softwares are being used by other Govt. organizations and private companies

Dictation Capturing System
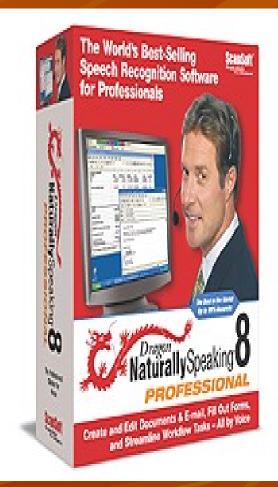
Technique

- Various options are available in the market :

  a.   Dragon Natural Speaking Software

  b. Dictaphones

  c. Dictation Softwares on PC / Laptops

Voice to Print Options

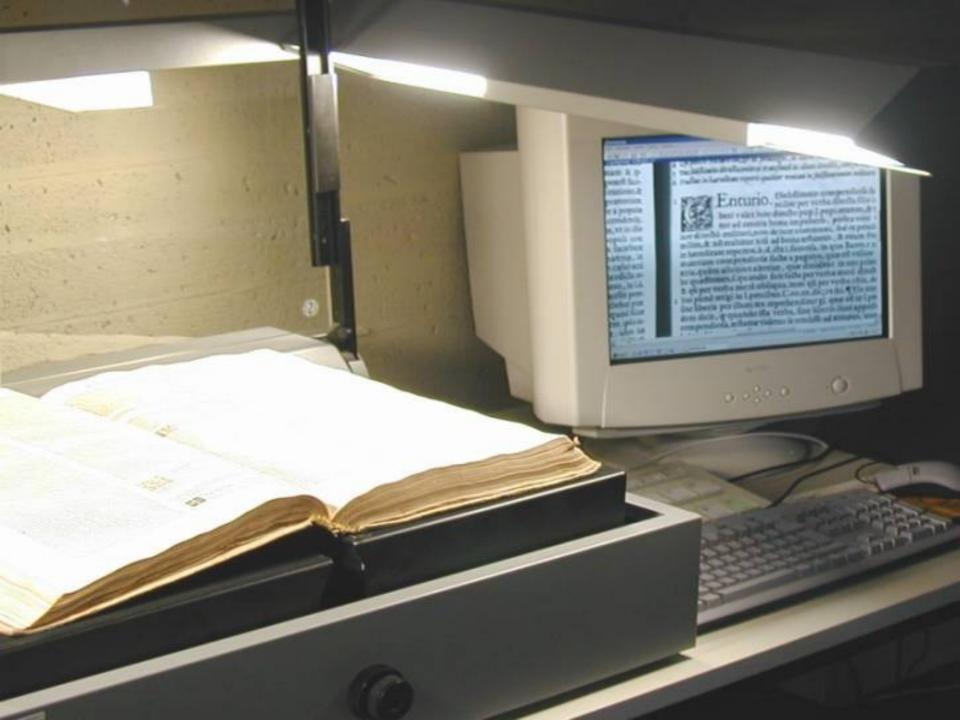# Dictation Capturing System

Benefits

- Saves time of the Judges
- Dictation can be given in spare time even at home
- Dependency upon stenographers is reduced
- The whole process of Judgement Writing is expedited
- Dictaphones can be used even while traveling

Dictation Capturing System

Practical Aspects

➢ Dragon Natural Speaking software is now available with Indian Accent but it takes time to train it to recognise your voice

➢ Dictaphones are extensively used in MNCs and abroad by managers and professionals like doctors, lawyers and chartered accountants etc.

➢ Limited use of these techniques has already began in Judiciary

Digitisation of Record Rooms

Technique

- Technology for fast scanning of Court files is available

- After scanning the files, OCR (Optical Character Recognition) software is run

- Proper indexing of the documents is done and the files are saved in original scanned format as well as in Word Format with index
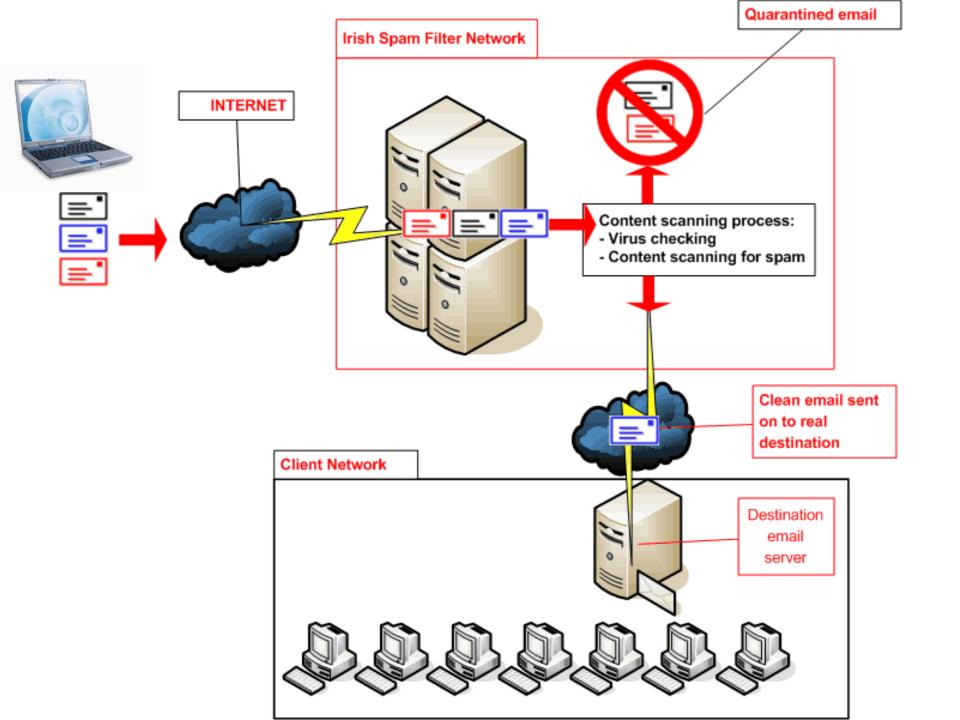
Digitisation of Record Rooms

Benefits

➢ One normal typed page is equal to 10 KB and after compression with Win Zip it is equal to 2 KB

➢ One Flash Drive of 256 MB capacity can store 1.28 Lac pages in Win Zip compressed format.

➢ One CD Rom of 700 MB can store 3.5 Lac pages

➢ One Hard Disk of 40 GB can store 2 Crore pages.

➢ The savings in maintaining record rooms will be huge

➢ Data can be retrieved very fast

Digitisation of Record Rooms

Practical Aspects

- Record rooms of Supreme Court and many High Courts are being digitized

- Pilot project to digitize the District Courts record room in Delhi is in final stages

- Certain changes in the rules are required to carry out record room digitization

- E-filing will certainly help in creating digital record rooms

E-mail Communication System

Technique

➢ Dedicated e-mail servers are to be installed in all Courts in India

➢ All the Courts are to be put on a VPN (Virtual Private Network) with Broad Band / Satellite Channels

➢ The Judges and Court officials are to be given E-mail IDs, Digital Signatures and training

➢ Appropriate Court Specific E-mail Software is to be developed

Quarantined email

Irish Spam Filter Network

INTERNET

Content scanning process:
- Virus checking
- Content scanning for spam

Clean email sent on to real destination

Client Network

Destination email server

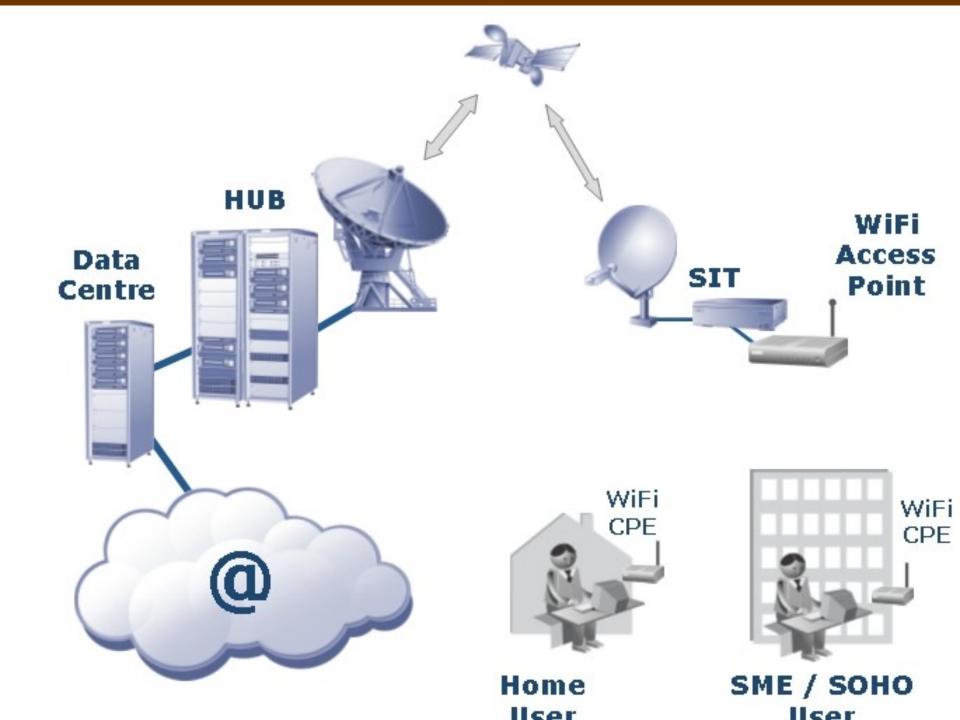# E-mail Communication System

Benefits

- Inter-Court & Intra-Court communication will become fast and secure

- Cost of paper, printing and distributing the mail / letters will be saved

- Orders from the superior Courts will reach instantly to the subordinate Courts ensuring immediate implementation

E-mail Communication System

Practical Aspects

- Judges in Delhi District Courts are being provided with individual e-mail IDs and Digital Signatures

- On trial basis release orders are being sent to Tihar Jail through secured e-mail in addition to conventional paper based orders.

- Part communication between different Court Complexes in Delhi is being done through e-mail

Wi-fi Networking

Technique

➢ Conventional system of connecting various computers through LAN (Local Area Network) has inherent weaknesses

➢ Wi-fi enabled network can be installed in a Court Complex on separate frequency then normal wireless networks like, mobile phones

➢ Any computer with required login and password can connect to the Wi-fi network

HUB

Data Centre

WiFi Access Point

SIT

@

WiFi CPE

Home User

WiFi CPE

SME / SOHO User

Wi-fi Networking

Benefits

- Wi-fi networking is cost effective in the long run
- Change of location of computers from one room to other does not require fresh laying of communication cables
- It is much secure and fast than normal network
- Computers can share common printers and other peripherals with Wi-fi network

Wi-fi Networking

Practical Aspects

- Wi-fi networks are already providing internet services at Airports and other places in India

- Many companies have already installed Wi-fi networks in their offices

- A study is being conducted in Delhi District Courts for providing Wi-fi networking

THANK YOU

Presented by:

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