

## Computerization Initiatives in the Income Tax Department.

# e-Governance

An Overview

## E-GOVERNANCE...

- **eGovernance** is a network of organizations to include government, nonprofit organizations, private-sector entities & Citizen
- **Powerful tool to bring all government services at the doorstep of the common man at affordable costs**
- **Enables government to be more efficient, transparent, accountable in providing quality services to citizens,**
- **Offers an opportunity to get closer to the citizen and upgrade the quality and range of their services, anytime, anywhere, anyhow**
- **Introduces transparent procedures like e-procurement, online land records maintenance, property registration etc.**

## Three Goals of e Governance

Reaching the unreached

Service  
Delivery

Internal  
Efficiency

Community  
Participation

## e-Government

- **e-Government** - electronic government, also known as **e-gov, digital government, online government, or connected government**) is digital interaction between :
  - I. a government and citizens (G2C),
  - II. government and businesses (G2B),
  - III. and between government agencies (G2G).
  - IV. This digital interaction consists of governance, information and communication technology(ICT), business process re-engineering(BPR), and e-citizen at all levels of government (city, state/province, national, and international).

## Models of e-Government

- ❑ The primary delivery models of e-Government can be divided into:
  - ❖ Government-to-Citizen or Government-to-Consumer (G2C)
  - ❖ Government-to-Business (G2B)
  - ❖ Government-to-Government (G2G)
  - ❖ Government-to-Employees (G2E)

- **Information and communications technology** usually called **ICT**, is often used as a synonym for [information technology](#) (IT) but is usually a more general term that stresses the role of [telecommunications](#) (telephone lines and wireless signals) in modern information technology. ICT consists of all technical means used to handle information and aid communication, including both computer and network hardware as well as necessary software.
- **Voice over Internet Protocol (Voice over IP, VoIP)** is any of a family of methodologies, [communication protocols](#), and transmission technologies for delivery of [voice communications](#) and [multimedia](#) sessions over [Internet Protocol](#) (IP) networks, such as the [Internet](#). Other terms frequently encountered and often used synonymously with VoIP are *IP telephony*, *Internet telephony*, *voice over broadband (VoBB)*, *broadband telephony*, and *broadband phone using TCP-IP*. (Transmission control protocol)

- **Business Process Reengineering** is the analysis and design of workflows and processes within an organization. A business process is a set of logically related tasks performed to achieve a defined business outcome.
  - [management information systems](#)
  - [Enterprise resource planning](#),
  - [supply chain management](#),
  - [knowledge management](#) systems,
  - [Human Resource Management Systems](#) and [customer relationship management](#).
- Business Process Reengineering is also known as Business Process Redesign, Business Transformation, or Business Process Change Management.
- **Business process reengineering** (BPR) began as a private sector technique to help [organizations](#) fundamentally rethink how they do their work in order to dramatically improve [customer service](#), cut [operational costs](#), and become world-class [competitors](#)



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# National e-Governance Plan

The National e-Governance Plan (2003-2007) of Indian Government seeks to lay the foundation and provide the impetus for long-term growth of e-Governance within the country. The plan seeks to create the right governance and institutional mechanisms, set up the core infrastructure and policies and implement a number of Mission Mode Projects at the center, state and integrated service levels to create a citizen-centric and business-centric environment for governance.

Click here to know more about:

- National e-Governance Plan
- Central MMPs
- State MMPs
- Integrated MMPs
- Implementation Strategy
- Components
- Other Components
- NeGP Programme Management Unit
- Contact Details

- Online Services under National e-Governance Plan**
- ☐ Income Tax
  - ☐ Passport/VISA
  - ☐ Company Affairs
  - ☐ Central Excise
  - ☐ Pensions
  - ☐ Land Records
  - ☐ Road Transport
  - ☐ Property Registration
  - ☐ Agriculture
  - ☐ Municipalities
  - ☐ Gram Panchayats (Rural)
  - ☐ Police
  - ☐ Employment Exchange
  - ☐ E-Courts

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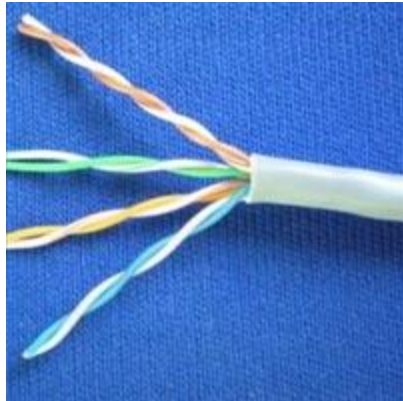
**How do I ?**

- Apply for GOV.IN Domain
- Waiting list status for Central Government Housing
- Check Court Judgements (JUDIS)
- Lodge Complaint with CVC
- Acts of Indian Parliament

[ view all ]



# e-Governance



UTP, or Unshielded Twisted Pair  
CAT3,CAT5,CAT6



**Optical fibre** is a thin, flexible, transparent fiber

Fibers are used instead of metal wires because signals travel along them with less loss and are also immune to electromagnetic interference

## Computerization: Execution Phases ( 95 - 05)

In 1993, Government constituted a Working Group to suggest a “Comprehensive Computerization Plan”



- *Key Recommendations:*
- **Layered Approach**
  - **Phased Implementation**



### 1

- NCC at Delhi & RCCs at Delhi, Mumbai & Chennai
- Offices linked to respective RCC through dedicated leased lines
- RCCs linked to NCC through dedicated leased lines

### 2

- 2-tier Client-Server application software implemented at these RCCs
- NCC brought under the administrative control of DIT(S)
- Computerization Plan extended to additional 33 centres (RCCs) with application rollout

Govt. of India initiated a

## **National e-Governance Plan (NeGP)**

**(2003-2007)**

for long term growth of e-Governance

within the country

to create a **citizen-centric**

and **business-centric enviroment**

for government

## Income Tax Mission Mode Project (MMP)

### Objectives of the MMP

1. To enable taxpayers to meet their normal tax obligations in a convenient manner without visiting Income Tax office.
2. To simplify tax compliance through e-governance.

### Stakeholders

1. Taxpayers.
2. Tax professionals.
3. Departmental Personnel
4. Government
5. Citizens

## Income Tax MMP (contd.)

### Services

- Allocation of PAN
- Paying taxes online
- Submission of returns online (e-return)
- Processing of tax return
- Processing of TDS return (e-tds)
- Issuance of refunds through electronic mode/Refund banker
- Taxpayer grievance redress
- Taxpayer correspondence

# e-Governance

e-Governance

Internet connectivity

*Making it easier to comply*



TAX INFORMATION NETWORK  
of Income Tax Department

National Academy of Direct taxes,  
NADT

Download challans with  
PAN / TAN

Pay Tax Online

Challan Status  
Enquiry

e - filing  
of returns

Intermediaries



Incometaxindia.gov.in

All forms

Home

Apply For PAN  
Online

check your PAN/TAN  
application status

Know Your  
PAN

National Data Centre



## E-Services to taxpayers

- *e-filing of Income tax return*
- *e-payment of taxes*
- *Tax Information Network (TDS/OLTAS/AIR)*
- *Refund Banker Scheme*
- *PAN/TAN allotment*
- *Income Tax Department Website*
- *Central Processing Centres*

## Integrated approach of NeGP project

- Public Private Partnerships have been promoted wherever feasible to enlarge the resource pool without compromising on the security aspects.



## THE SI Initiative

## Single National Database

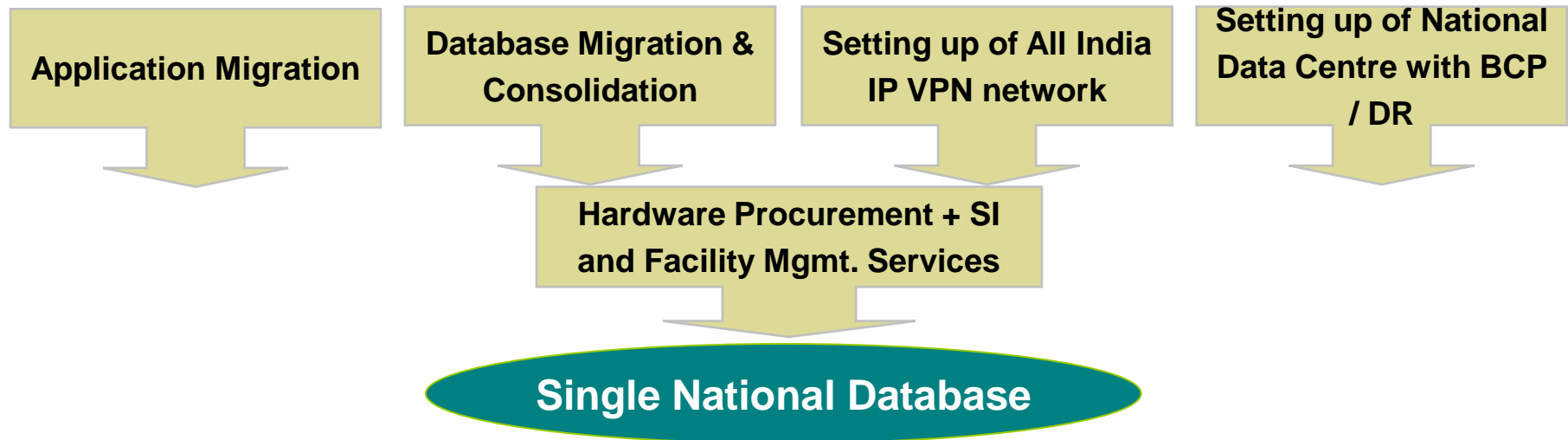
### Projects Implemented

- *Consolidation of 36 regional databases into single national database*
- National Data Center with Business Continuity and Disaster Recovery sites
- *All India Network linking all Income Tax Offices*

### Salient Features

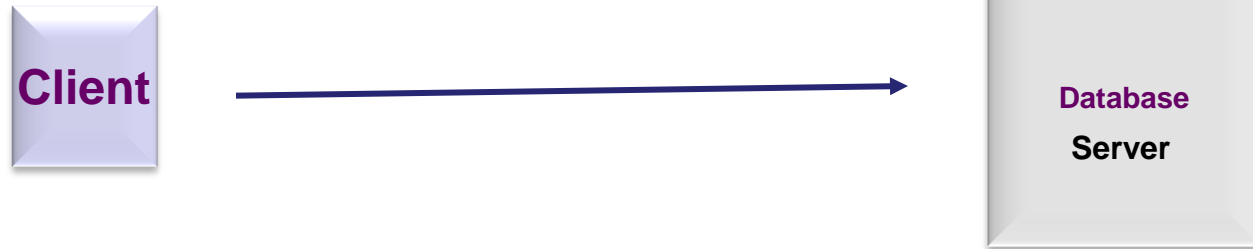
- *'Anytime anywhere' computing. Jurisdiction-free filing / processing*
- Higher availability of computer resources.
- Better management of Application software
- National helpdesk

### Key steps to achieve Single National Database

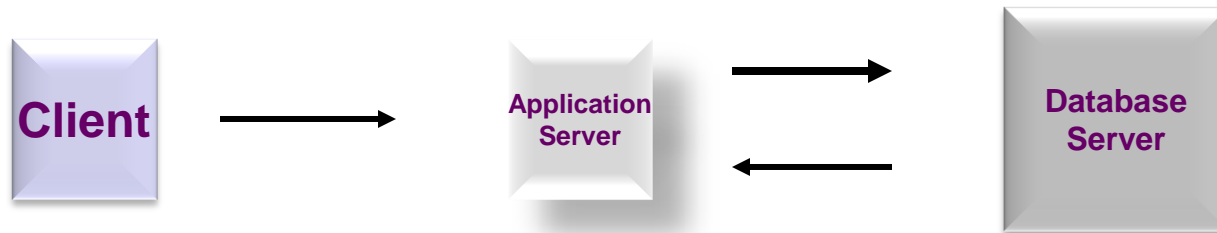


## Three Tier Architecture

- Old 2 tier Architecture

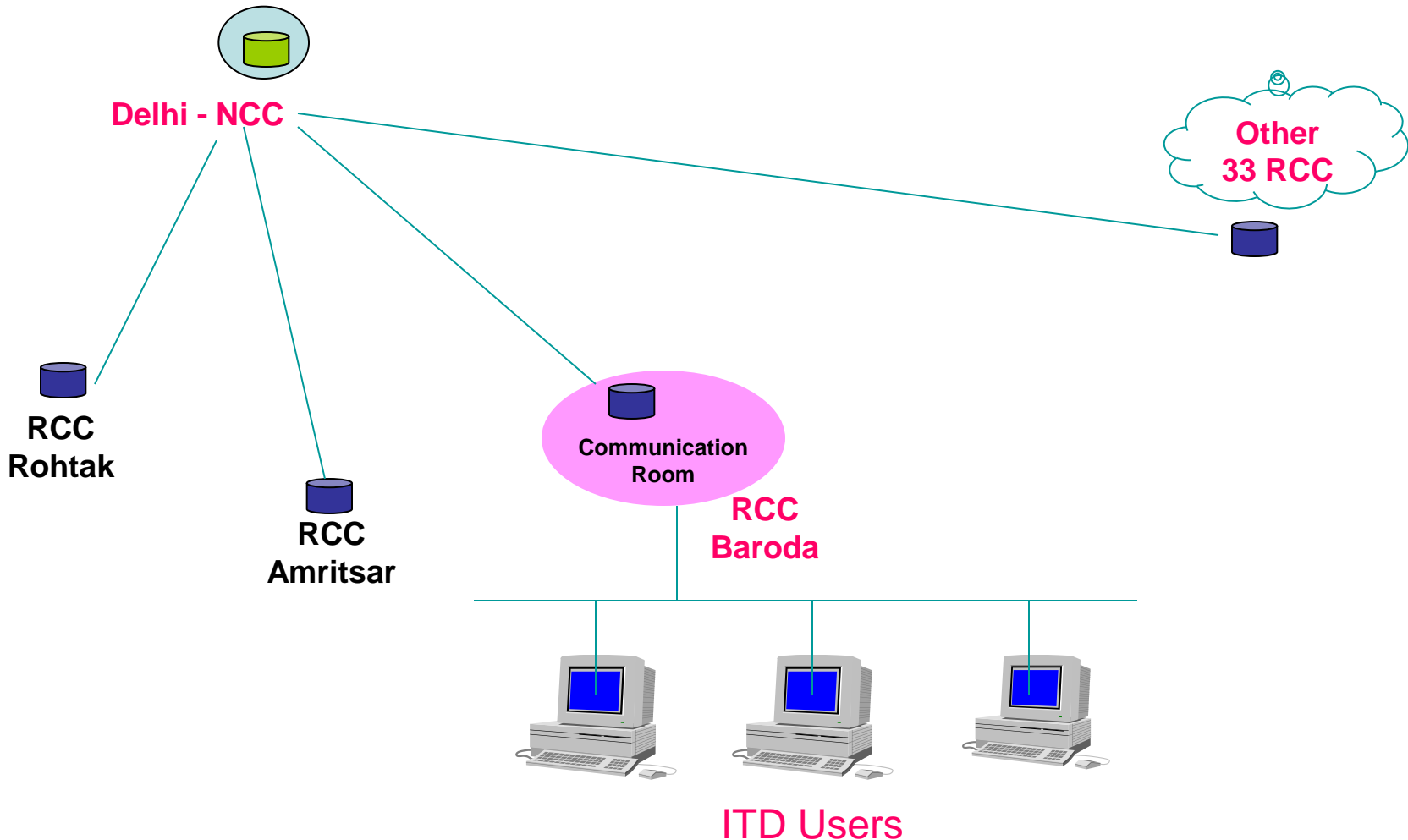


- Current 3 Tier Architecture

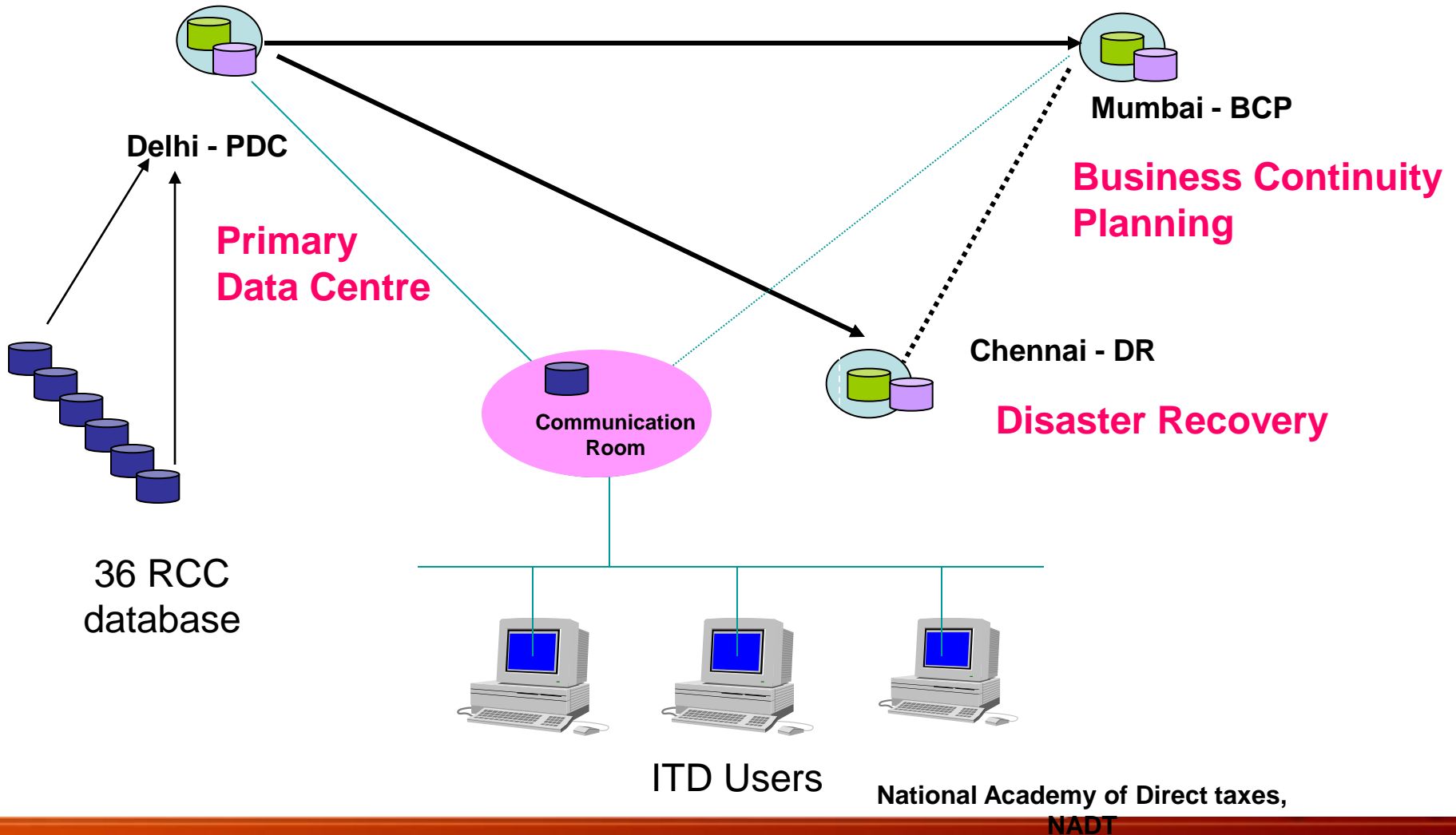


- Internationally all large organisations have adopted 3 tier architecture.
- In india, Banks, Insurance companies, MNCs etc are adopting this efficient model.

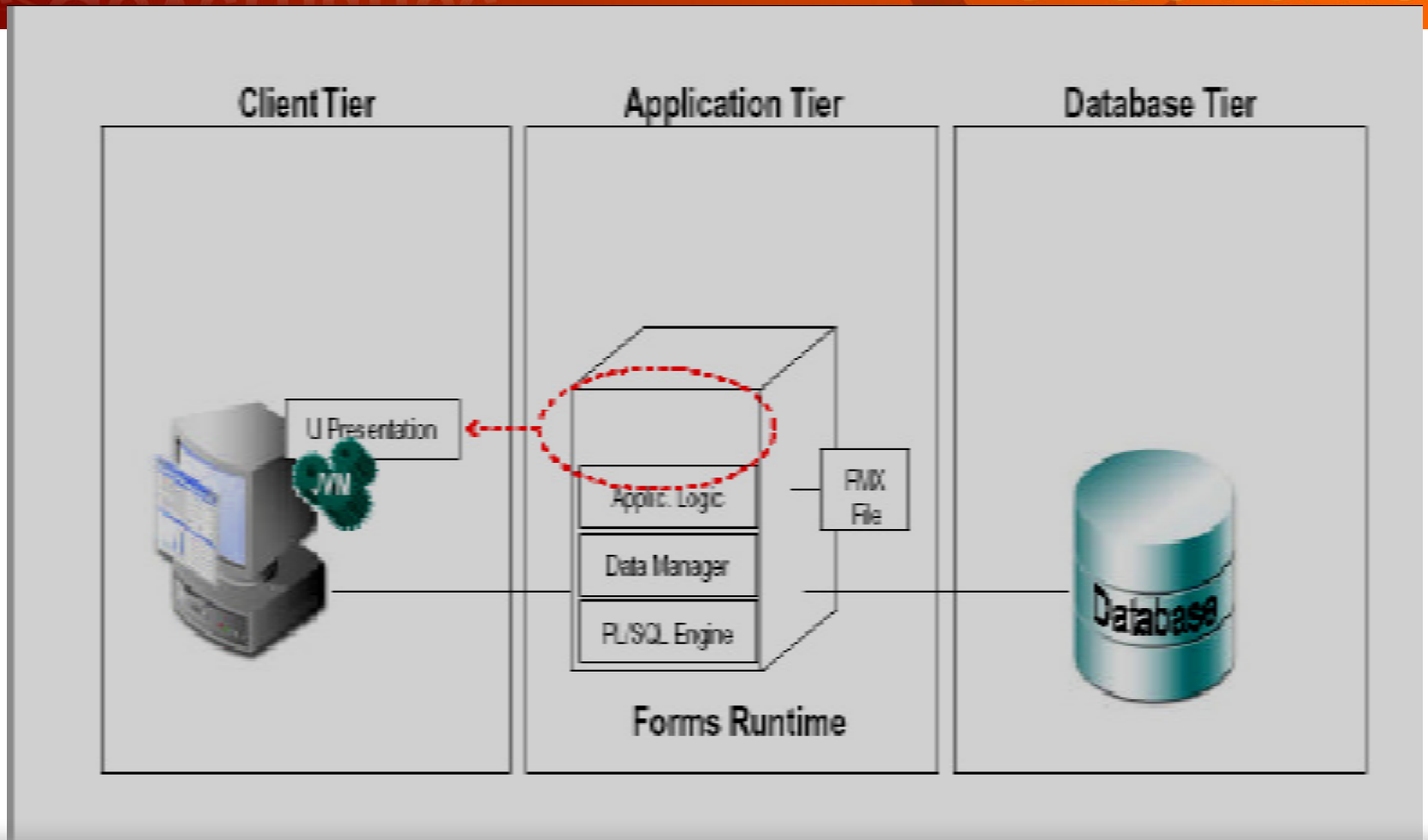
## 2-Tier Architecture:



## Migrated 3 – Tier Architecture:



# e3-Tier ITD Application Architecture



In a three-tier architecture, the data and applications are split onto separate servers, with the server-side distributed between a database server and an application server. The client is a front end, simply requesting and displaying data. The application server is capable of replying all queries relating to application and it will hit database only for database queries/insertions hence this system is faster than 2-Tier.

## Three Tier Architecture

- User interface/presentation tier, functional process logic and data storage are independent of each other and are on separate platform.
- the three-tier architecture is intended to allow any of the three tiers to be upgraded or replaced independently as requirements or technology change.

## About ITD Application

- ITD Application is deployed on 3-Tier Architecture which works on in Web environment.
- Application is presently using Oracle Forms 10g/Reports 10g, Oracle Application Server 10g and Oracle 10g Database. (Earlier development was on Oracle Forms 4.5/Reports 2.5, Oracle Application Server 7 and Oracle 7 Database , which has been upgraded to newer versions).
- Computers are connected through network to Primary Data Centre (PDC) at Delhi and Business Continuity Plan Centre (BCP) at Mumbai.



## Different layers

- The user interface runs on a desktop PC and uses a standard graphical user interface (GUI),
- Functional process logic may consist of one or more separate modules running on a workstation or application server, the middle tier may be multi-tiered itself
- An RDBMS on a database server or mainframe contains the computer data storage logic.

## Presentation tier

The top-most level of the application is the user interface. The main function of the interface is to translate tasks and results to something the user can understand.



## Logic tier

This layer coordinates the application, processes commands, makes logical decisions and evaluations, and performs calculations. It also moves and processes data between the two surrounding layers.



GET LIST OF ALL SALES MADE LAST YEAR



ADD ALL SALES TOGETHER



## Data tier

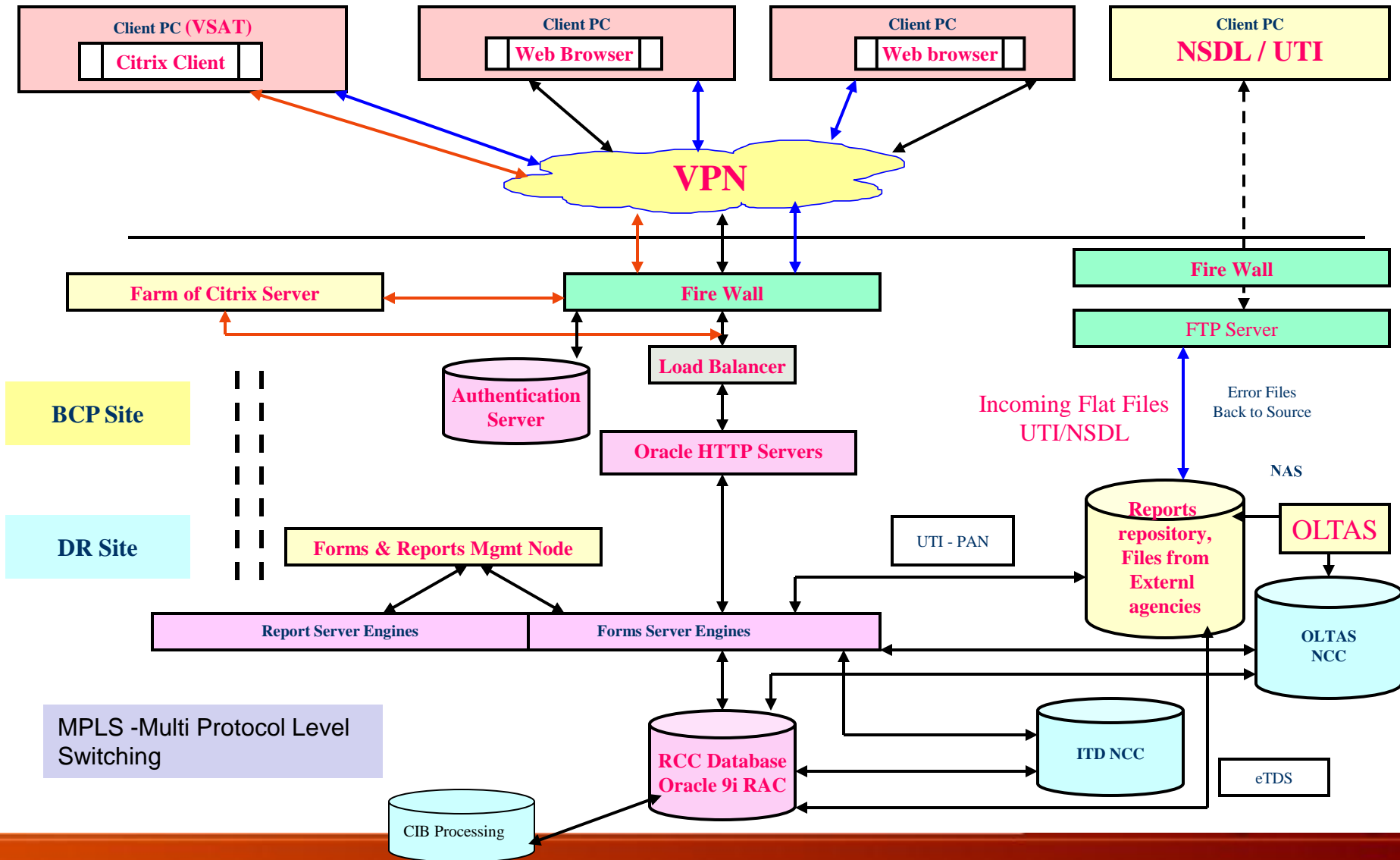
Here information is stored and retrieved from a database or file system. The information is then passed back to the logic tier for processing, and then eventually back to the user.



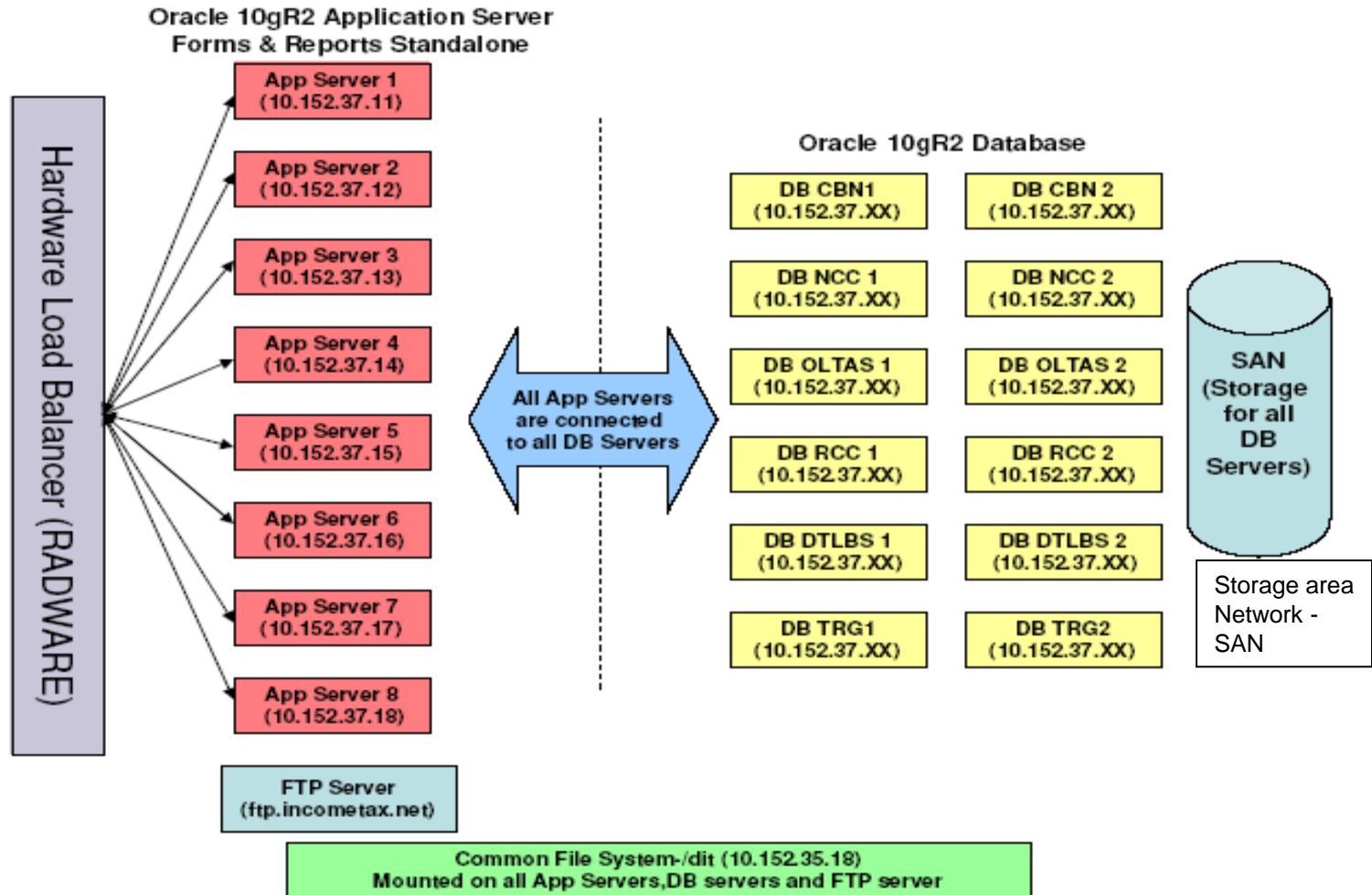
## Advantages of a three-tier architecture

- It is easier to modify or replace any tier without affecting the other tiers.
- Separating the application and database functionality means better load balancing.
- Adequate security policies can be enforced within the server tiers without hindering the clients

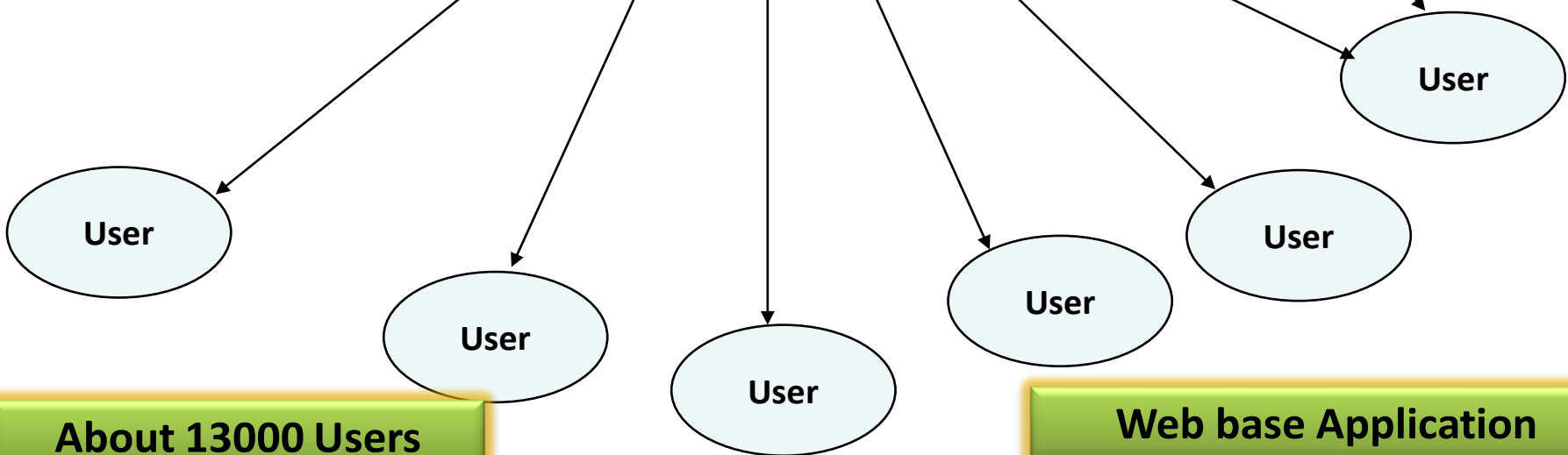
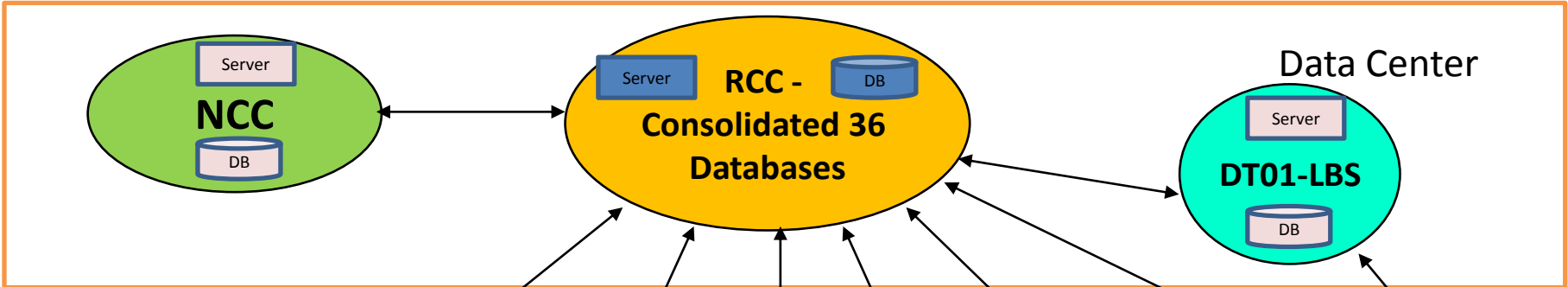
## 3 - Tier Architecture Schematic



## ITD Primary Data Centre (PDC), Delhi



NCC contains procedures and admin information of ITD.  
RCC contains data of all the RCC's and takes parameters from NCC.



Centralized PAN data

Centralized Returns

Centralized Challans

Centralized TDS

Centralized AIR data

Centralized Income Tax Employee data

- **USER END SECURITY**

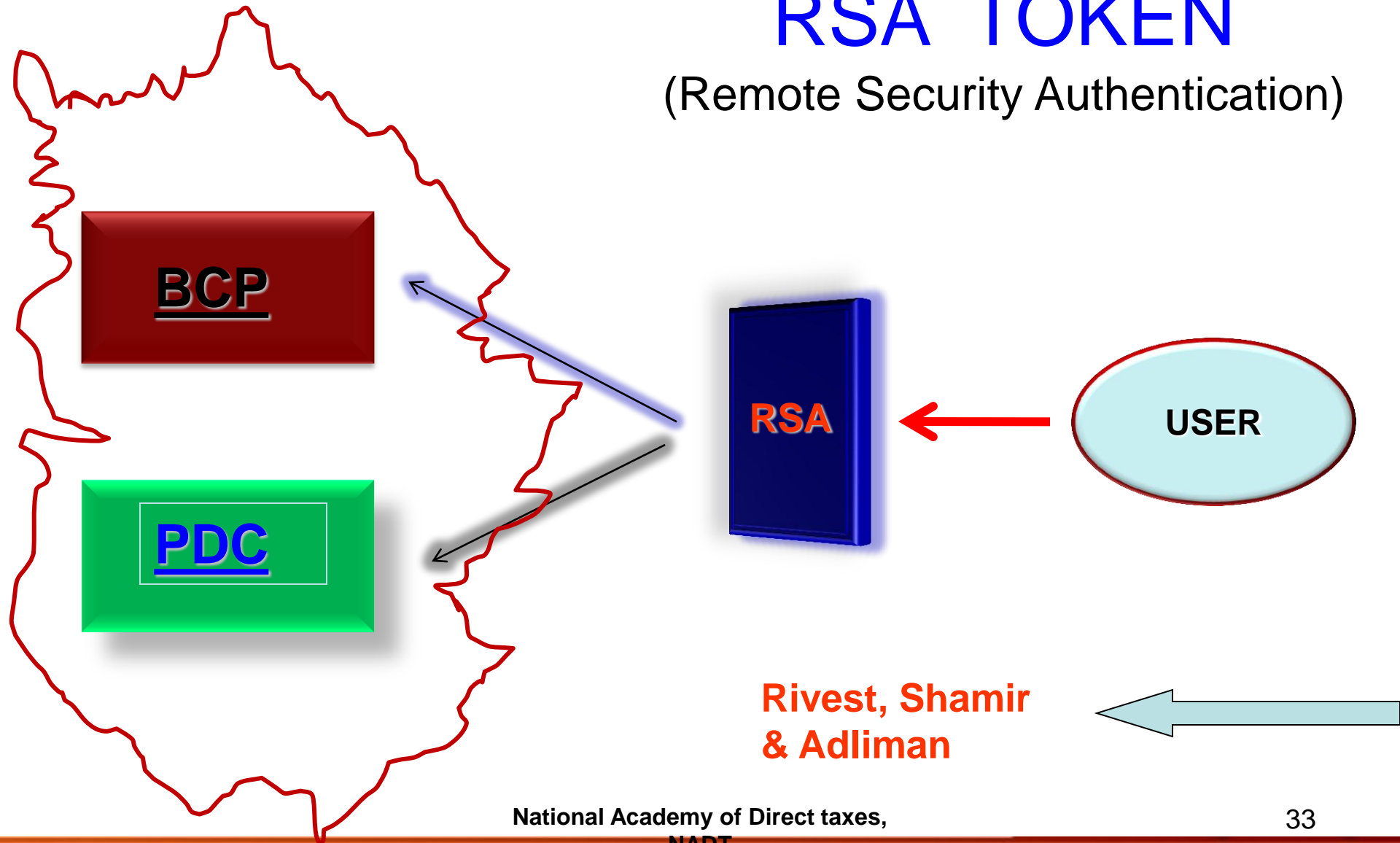
## RSA SecurID Token – A Key to access ITD Applications – Remote Security Authentication





## RSA TOKEN

(Remote Security Authentication)



## Advantages of the new architecture

- Managing a consolidated RCC database is simpler as compared to 36 RCCs in terms of manageability and resource cost
- Version control of software will be simple as will be applied in one RCC
- Global view of data will be available\
- Off-peak Batch Processing and Report Generation (Scheduler based)

## Data Replication & Disaster Recovery Planning (S.I.)

- A full-fledged Business Continuity (BCP) Site has been established at Mumbai.
- The BCP site is an exact replica of the Primary site.
- The Department has also set up a Disaster Recovery (DR) Site at Chennai, which will act as a data store. The DR site is not expected to have ability to run applications, but will have an exact copy of the data as that of the Primary site.
- The data will be replicated from the Primary site to the BCP and DR sites on a regular basis.

## **TAXNET Project**

- Presently 709 Offices are connected to the National Data Centre.

# **e-Filing of Income Tax Returns**

## The Business Need

- Mandate from Ministry of Finance to bring e-governance into the IT-Return filing by citizens
- Direct contact between Citizens and Department
- Enable citizens to file “anytime and from anywhere”
- Annexure-less filing

## Advantages of e-filing

- **Quicker time to revert on corrections or refunds**
- **Direct window to citizens to query the Department, and to provide feedback**
- **Quicker processing of data**
- **No need for manual entry of data**
- **Better MIS resulting in better understanding of the road ahead.**

## ***Tax Information Network***