

Master Service Agreement

Between  
Punjab Land Records Society,  
(Office of Director Land Records)

And

CMS COMPUTERS LIMITED

To Outsource

Computerisation of Registration &  
Land Records Management System and Provisioning of  
Citizen and Back-end Services Through Establishment  
and Operations & Management of Citizen Service  
Centres  
Throughout the State of Punjab

on

**Public Private Partnership Model**



पंजाब PUNJAB

C 150668

### Master Services Agreement

**THIS AGREEMENT** is made this 20<sup>th</sup> day of September, 2006

#### BETWEEN:

**Authorised Representative, Punjab Land Records Society, Government of Punjab** having its administrative office at Department of Land Records Punjab, Kapurthala Road, Jalandhar, Punjab, India hereinafter referred to as "Buyer" (which term or expression unless excluded by or repugnant to the subject or context shall mean and include its successors-in-office and assigns) of the FIRST PART;

#### AND

CMS COMPUTERS LIMITED, a registered company under the Indian Companies Act, 1956 having a registered office at 201, Arcadia Nariman Point, Mumbai - 400 021 and place of business at Plot No.91, Street No.7, MIDC, Andheri (E), Mumbai, 400 097 (hereinafter referred to as "Operator").

**MEMBER SECRETARY**  
Punjab Land Records Society  
Kapurthala Road  
JALANDHAR



For CMS Computers Ltd.

Director.

For CMS Computers Ltd.



Director.

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ਦੇਖਣ ਵਾਲੇ ਨੂੰ ਪਤਾ ਲਗੇ

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ਸੇਵਾ ਵਿੱਚ  
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Punjab Land Records Society  
Jalandhar

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**WHEREAS**

Authorised Representative, PLRS wishes to leverage state-of-art technologies and streamline the Administration of Citizen Service Centers in district, to provide a responsive and effective administration for an efficient, speedy, simple and cost effective service to the public of Punjab. To achieve this objective, the administration has decided to computerise the Land Records Management and Property Registration Process at all the Citizen Service Centers across the state of Punjab. The initiative is named as **"Computerisation of Land Records Management and Property Registration Process". ("the Project" )**

Bids were invited by Authorised Representative, PLRS, Punjab on behalf of Punjab Land Records Society (PLRS) to select agencies to provide services (manpower, hardware, software, infrastructure and management) on Build-Own-Operate-Transfer (BOOT) basis as a Fixed Cost Model to run the computerised Land Records and Registration services at all the Citizen Service Centres across the State of Punjab.

Authorised Representative, PLRS undertook selection of a suitable operator through competitive tendering for implementing the Project and in this behalf issued an Expression of Interest dated 25<sup>th</sup> April, 2005 followed by the Request for Proposal (RFP) dated 12<sup>th</sup> May, 2006 issued to the qualified Operators;

The Authorised Representative, PLRS intends to grant to the Operator the right to undertake and implement the Project on the terms and conditions set forth below for a period of Sixty Months from the date of Operationalisation of Registration Services at Citizen Service Centers ("Term") to

- (a) Procure, Install, Operate, maintain the equipments, provide manpower services and manage the services and the Project; and
- (b) at the end of the Term transfer backs all the Assets and exclusive facilities;

The Operator in pursuance of its bid undertakes to implement the Project during the Term. As part of the acceptance, the Operator shall furnish the Performance Guarantee as defined in this Agreement;



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**MEMBER SECRETARY**  
**Punjab Land Records Society**  
**Kapurthala Road**  
**JALANDHAR.**



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**Director**

**NOW THERE FORE, IN VIEW OF THE MUTUAL PROMISES AND CONSIDERATION SET OUT HEREIN,** the Authorised Representative, PLRS on behalf of Punjab Land Records Society, Punjab and the Operator have agreed to enter into this Master Services Agreement ("MSA") to govern the way in which the

Operator will build and manage the facilities and deliver the services specified under this Agreement and the Service Level Agreement ("SLA") in accordance with roles and responsibilities of the Authorised Representative, PLRS and its nominated agencies and the Operator as set forth in the RFP:

**NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:**

## **1.1 Project Processes**

### **1.1.1 Data Entry**

1. The Operator shall do the data entry for all the registers as listed below:
  - (i) Shajra Nasb (Pedigree table) - The Shajra Nasab from the last Jamabandi of the respective village is to be entered.
  - (ii) Jamabandi - The latest Jamabandi of the village has to be entered.
  - (iii) Mutation - The data entry for mutation register for the existing period. i.e. all mutations carried out from previous Jamabandi and which are appearing in the remarks columns are required to be entered. Accordingly, each village may have mutation records from one year to five year based on the Daur for the respective village.
  - (iv) Roznamcha Waqiyati - The scope for data entry would include all entries which are relevant and required to be recorded in the remarks column of the Jamabandi.
  - (v) Khasra Girdawari - The Girdawari entries are to be entered for all seasons for Jamabandi period. The entries for number of seasons that are required to be entered will vary from one season to ten seasons depending on the daur of Jamabandi. As it is envisaged that the first six columns of the Girdawari would be available from the Jamabandi entry, the data entry requirement will be limited to the crop, the cultivator and means of irrigation. It is also observed that usually there is



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only approximate 20% change in the data for subsequent seasons with rest of the data remaining same.

- (vi) Field Book - To enter the field book which gives details of dimensions of each Khasra of the village.
  - (vii) Cadastral Maps / Musavis - To digitize the cadastral maps per village. A scanner of appropriate size and configuration may be required for the process of digitizing musavis.
2. The payment fee of data entry is inclusive of all the data entry, print outs and three level validations viz by the Operator, revenue department and public authentication.
  3. The digitized data should be validated by the Operator by hiring of suitable personnel preferably the retired Patwaris or Kanungos in the first stage. The Operator should bring to the notice of the concerned CRO about the wrong entries in the manual records.
  4. The Operator will ensure atleast 98% accuracy at record level as per the manual records before handing over first printouts for second level authentication by Revenue Department. The Patwaris will check a sample of records to determine the level of accuracy of records being submitted by Operator.
  5. The procedure for subsequent validation of the data shall be as under:
    - (i) The second authentication of data shall be done by the concerned Patwari (100% checking), then by the concerned Kanungo (100% checking), and finally by the concerned CRO (25% checking).
    - (ii) After the checking by the revenue department, a copy of the documents shall be used for giving nakals to the citizens for public validations and checking. After this process and incorporation of changes by the Operator, last verification of the corrected records would again be done by Patwari (100% checking), then by the concerned Kanungo (100% checking), and finally by the concerned CRO (25% checking). The final cleaned data on a Compact Disk (CD) shall be handed over to the respective Deputy Commissioner. The same is to be loaded in the tehsil server. A copy of the clean records shall be printed and shall be handed over to appropriate authority for submission to the District Record Room.



  
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6. The Operator will ensure 100% accuracy at the time of final printouts as per the document verified by revenue department and public scrutiny.
7. Musavis have to be digitized at a central location as specified by PLRS. The digitization (drafting) of Musavis should be done using any standard cad software (ex. Autocad) on the 1:1 scale. The cadastral map should be digitized in different layers like Road, Abadi, Khasra, Well, Water bodies, Railway line etc with proper colors for special features and a topology should be created. The file should then be converted to a shape file to make it workable with the PLRS Application Database. The digitisation of Musavis should be in line with data entry plan wherein both, should be completed at the time of go-live. The first verification of digitized Musavi should be done by comparing with existing manual Musavi. The Musavis should then be updated by incorporating Tatima Shajras and the updated Musavi should be as per the Khasra number in Jamabandi. The second verification should be done by cross checking with respective field book.
8. The Operator will be responsible for ensuring security and back up of the data during the data entry process until the data is handed over to the respective Deputy Commissioner (Kanungo-wise).
9. Deputy Commissioner shall provide for availability of Patwaris / Kanungos along with documents to the Operator without any delay. Concerned Patwaris / Kanungos will be responsible for ensuring security of their documents during the entire data entry process completion.
10. The computerized data on CDs and one hard copy (binded suitably) shall be the final deliverable, along with intermediate copies of print outs used for validation purposes. Authorised revenue authority will be responsible for acceptance of all deliverables.

#### 1.1.1.1 Responsibilities

##### A. District Administration

1. Data of all the manual records shall be provided by the District Administration.
2. For data entry purpose District Administration/PLRS will provide data entry module of the PLRS Application, manual records and will provide



  
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space (premises) with appropriate ventilation, normal electricity connection and lighting. All the other requisite resources and running expenses for data entry including, but, not limited to manpower, hardware, software licenses shall be arranged by the Operator at its own cost.

3. The Revenue authorities as provided in the rules of the PLRS will do all the necessary data validation and checking for the final acceptance of the deliverables in stipulated time, and must meet weekly/ fortnightly basis.
4. The necessary software shall be provided by the district administration.
5. The existing manual records/ data which have to be computerized (input data) should be provided to the Operator at the data entry premises on a regular basis, as per schedule. Proper handing over and taking over registers shall be maintained at the premises of data entry. All the records shall be provided Kanungo-wise.
6. Concerned patwaris shall be available during the data entry for any help or assistance, whenever required or requested by the operator.
7. At the time of verification of the computerized data, the deputed revenue officers shall verify the records/data and submit the same in the stipulated time. The documents after verification by the Patwari (100%), Kanungo (100%) and the CRO (25%) shall be returned to return to the Operator by the district administration within 3 weeks from the date of handing over of the data.
8. The district administration shall be responsible for the public validation of the data. The data shall be returned to the Operator within 2 weeks of handing over of the data.
9. The working hours for data entry shall be mutually decided between respective Deputy Commissioner and the Operator.
10. The final validated data provided to the district administration shall be accepted and will be made live within three weeks of the submission.
11. In case, there are delays in completing the data entry of a Kanungo due to:
  - a. All records of the Kanungo not made available to the Operator.
  - b. Delay in validation by the concerned Patwari (100% checking), then by the concerned Kanungo (100% checking), and finally by the concerned CRO (25% checking).



  
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- c. Delay in public validations
- d. Non availability of the concerned Patwari and Kanungos as per the request of the operator
- e. Errors due to application software provided by PLRS
- f. Legal issues related to any of the records
- g. Any other reasons not accountable to the Operator

The Operator shall bill for the work completed and the Deputy Commissioner Office shall make payment on pro-rata basis within 30 days of receipt of bill.

12. In case there is a delay in loading the server beyond three weeks, the Operator shall bill for the balance amount and the payment shall be made by the Deputy Commissioner office within 30 days of receipt of bill.

#### **B. Operator**

1. The Data Entry Operators should be trained on the application software.
2. The Data entry has to be completed in mutually agreed time frame drawn out between the Operator and respective Deputy Commissioner.
3. The hardware for the data entry process including the servers, desktop machines, UPS, Printers etc. involved will be the sole responsibility of the Operator including the operating system. The Operator will be responsible for the LAN connectivity in the premises to be used for the Data Entry. The Operator will also be responsible for the required software. Punjab Government shall not be responsible for any infrastructure creation.
4. The Operator shall be responsible for insurance of its equipment / infrastructure.
5. All amenities and refreshments, if any for operators have to be provided by the Operator.
6. The furniture required for the data entry process will be the sole responsibility of the Operator.
7. Any generator and its consumables etc. to be used during the data entry process for non-interruption of data entry operations. The electricity charges shall be borne by the Operator. Separate sub-meter shall be arranged by the Operator. Punjab Govt. shall arrange additional power load, if required.



  
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- c. Delay in public validations
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8. Any third party verification by hiring retired Revenue officials will be hired by the Operator.
9. The Operator shall be responsible for taking backups of all the data, which is computerized, on a regular basis.
10. The Operator shall provide 1<sup>st</sup> print out for the validation / checking by the Patwari/ Kanungo / CRO. The 2<sup>nd</sup> print shall be provided for public validation and the 3<sup>rd</sup> print for submission of final records. The stationary, ink and other consumables shall be provided by the Operator at its own expense. The final deliverable of CD and printout of all registers shall also be the responsibility of the Operator.
11. Any additional print outs demanded by District Administration shall be provided by the Operator at an additional cost. However, in case, additional print out is required because of reasons attributable to the Operator, no additional charges shall be payable.
12. In case there are more than 3 sheets of print outs per khewat, PLRS will pay/ provide for the extra stationery.
13. In case, there are delays in completing the data entry by the Operator due to any reason, there shall be penalty as per the agreed Service Level Agreement (SLA). Decision of the respective Deputy Commissioner shall be final and binding on the Operator.
14. In case, the Operator fails to maintain the defined accuracy level, there shall be penalty as per the agreed SLA.
15. The Operator shall report any deficiency on the part of Punjab Govt to the respective Deputy Commissioner at appropriate time to avoid delay in execution of project.
16. Data created shall be the property of Punjab Govt and the Operator will not use / share / transfer / give access to this data with any other operator / Government / Company / Individual / entity.
17. No language translation support shall be provided by Punjab Govt.

**Note:** "Review Committee" means the committee, which would inspect and certify the final deliverables after the submission of the same by the Operator as per the decided timelines by the parties. The Review Committee shall comprise of the representatives of Govt. of Punjab to be constituted by the respective Deputy Commissioners. It would include minimum of one representatives of the Operator.

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### 1.1.1.2 Progress/ Supervision/ Review/ Monitoring

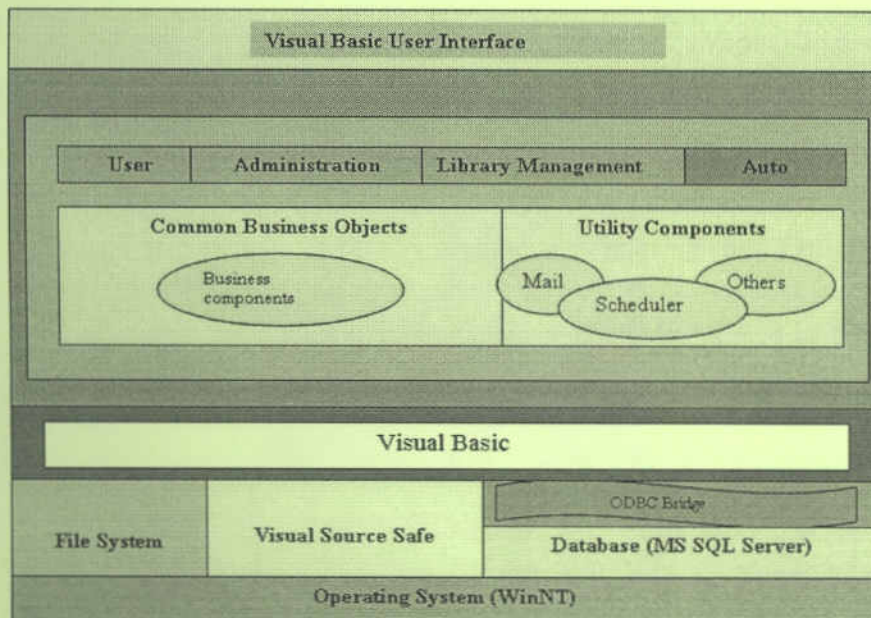
- a. The district administration shall hold periodic review of the project and shall have the powers to supervise and take appropriate decisions in the Project in all forms. The Operator shall submit periodic reports, as may be mutually decided.
- b. Respective Deputy Commissioners / Sub-Divisional Magistrate shall monitor the progress of the project on day to day basis and the Operator shall have to work under their supervision, guidance and direction and in doing so the respective authority shall have all the powers to direct, supervise and communicate with respect to project implementation and execution.

Data Entry screens and other features are detailed in Annexure 7 of Volume 1 of RFP.

### 1.1.2 PLRS Software for Land Records System

#### SYSTEM ARCHITECTURE

The System Architecture of PLRS Application is shown below:



The system architecture is designed to achieve:

- a. **Scalability:** Ability of the software to handle complete load of land records for the entire state.
- b. **Flexibility:** Ability of the software to be integrated with different software, such as PRISM (Registration software) or any other single window e-governance concepts in the future.
- c. **Web-readiness:** Provision for records including maps to be published on web.



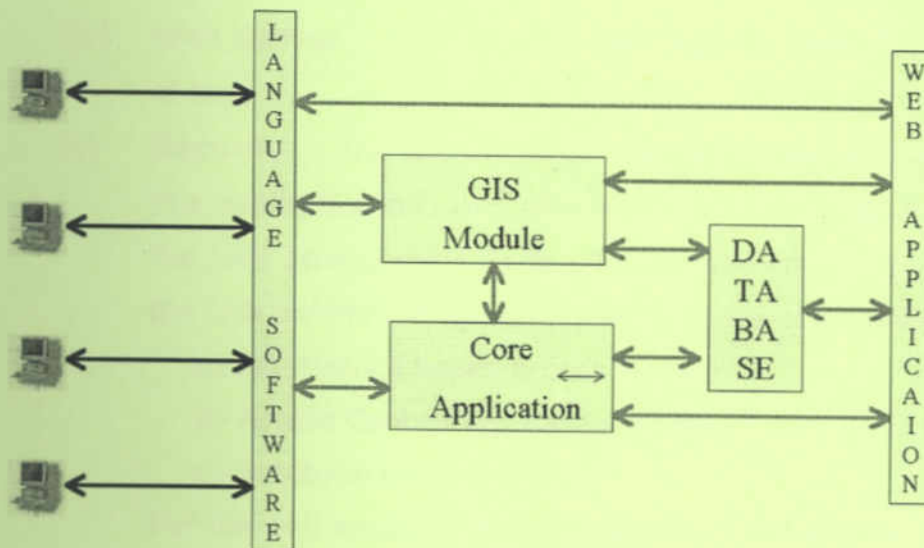
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The linking of major components of PLRS Software is show below:



The system architecture is detailed below:

- (i) **Operating System** - The system uses Windows 2000 Server and MS SQL Server 2000 at the backend and Windows 2000 clients with IE 5.0 at the front end.
- (ii) **Application Software** - The PLRS software integrates the core application software with cadastral maps. The application is web enabled with Punjabi and English (Optional) interfaces. The different components of the application are shown below:

VB	Java Swing	Front End
Java 2 Enterprise Edition		Business Logic
Microsoft SQL Server		Database

Three-tier architecture for the application is shown in the above figure. The database is MS SQL Server 2000 and the application is developed in J2EE and Visual Basic, Java Servlets. The application software has the following capabilities:

- a. Data Capture
- b. Data Processing
- c. GIS Related
- d. Web Related
- e. Interface Language
- f. Reports
- g. Other Requirements

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- (iii) **Database Software** - The database required is MS SQL Server 2000 and respective client licenses.
- (iv) **Web Server** - The software uses Apache web server which is free of cost.
- (v) **Security** - The software has the best possible security features. The application has two environments from security point of view: the LAN environment in the Tehsil, and the web environment. In the LAN environment, broadly three types of security mechanisms:
  - a) Bio-metrics based access
  - b) Access Control List based access
  - c) Database level security

For the web environment, the security mechanisms are:

- a) Firewall to prevent access to unauthorized personnel
- b) Encryption of all data that is being transmitted over the networks
- c) Read only data on the web server

#### **Data Entry Module**

This module is used to perform data entry of following registers:

1. Jamabandi
2. Mutation
3. Khasra Girdawari
4. Field Book
5. Roznamcha Waqiyati

The data entry module uses Inscript Punjabi Keyboard. To help the user, online help and a virtual keyboard are also provided.

#### **Features of Punjabi Language ActiveX Control**

- (i) This is a one-window component. As the user types, the results are displayed in the same window.
- (ii) This component uses the English Keyboard to type in Punjabi in Inscript Keyboard
- (iii) A virtual keyboard is displayed on the screen so that the user need not remember the character mapping.
- (iv) Help for each *character or matra* is available on the screen, helping the user in composing the message.
- (v) The component maintains a database of commonly used English words as well as language words. This feature increases the user's composing speed as well as reducing errors.
- (vi) English and any one other language can be used simultaneously.



  
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- (vii) Words are edited according to their Phonetic English spellings.

### Transliteration Features

Some of the major features worth highlighting are:

- (i) To write a word ending with "aa" matra, adding a single "a" with space, adds the matra. For instance to spell **kya**, instead of typing kyaa, one can merely type "kya".
- (ii) Reverse logic is reverse transliteration from lingual to roman is also possible via the component.
- (iii) User can define Custom shortcuts or equivalents that will overcome the regular word list or the regular phonetic logic. This is very useful with commonly used words. For instance, by typing DC, we can tweak the component to display the Hindi equivalent of *depte kamishnar*.
- (iv) Every key on the keyboard is mapped to specific lingual character.

Thus the phonetic nature of Indian languages makes them easily adaptable to another input method namely that of spelling the words phonetically in Roman English and then transliterating the matter into the chosen Indian language. This can be made use of in allowing the user to communicate in his own mother tongue by using the Standard English keyboard.

**Storage & Sorting Features** - The language component can perform all the database operations - storage, sorting, inserting or retrieving for any kind of lingual, roman, ISCII or Unicode text.

**Searching** - Being based on the fixed character code, the language component allows efficient sorting, searching, display and editing of text. The component is efficient enough to search any kind of text input, be it Roman, ISCII, Unicode or Lingual in to the database where again any of the said types are stored as desired. Hence it can perform all the database operations for any kind of text desired.

PLRS Software developed to be used for Data Entry cum Citizen Service Center Operations has following **salient features** built into it:

1. The Land Record System is a very delicate system as any error in computerized data may result in increase in disputes and litigation and will defeat the very purpose of the Land Records Computerisation. Keeping this in mind, extra care has been taken in providing **extensive validation** checks during data entry, online as well as offline.
2. The Software prepared is totally **multi-user** in its functioning. That is, it is possible to ensure entry of data by various operators simultaneously.



  
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However, it is advised that only one operator should perform data entry of one register of a village at a time.

3. **Multi-Level security** has been incorporated by providing authorized access and protection at three levels. At level one, the system security features have been used. At second level, security features of the DBMS have been used. At final level, Land Records Computerisation Software ensures the authorization to use the Software to only authorized users by giving operators unique codes and secret passwords to operate.
4. The package is completely **menu-driven and user-friendly**. The user is reminded with suitable messages for a particular parameter for which he/she is going to feed the data. It is very easy for the user to make out the stage of data entry, and what previous information he/she has fed already.
5. Instead of entering the text as such, **extensive codifications have** been used at all levels and wherever the help is required on codes, it can be had by pressing only one key. This reduces errors, improves data entry speed and enables various types of queries and reports not otherwise possible.
6. Screen reports have been provided to give the user another facility for **validating data online**. Viewing on screen and then making the changes saves a lot of time involved in the correction process. Printing of checklist and wastage of stationery is also avoided in this way.

The PLRS Software application constitute of the following major modules:

1. **Administration Module:** Initiates software by entering villages, officials etc. It has options for setting permissions, and scope for housekeeping tasks - reindexing, archival.
2. **Data Entry Module:** Used for data entry of latest Jamabandi and other records to bring the system up to date or 'online'.
3. **Mutation Module:** For entering various types of mutations.
4. **Khasra Girdawari:** Updates the Girdawari (incorporating changes due to mutations); preparation of the bi-annual Girdawaris; Processing - Jinswar, Lal Kithab etc.
5. **Jamabandi:** Generates New Jamabandi based on old Jamabandi and subsequent mutations automatically.
6. **Reports:** Generates Nakal (of Jamabandi, Mutation Register, Girdawari etc.); Monthly Reports etc.



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7. **Citizen Interface:** Web-enabled maps; Click on khasra to see details; Web site; FAQs; Check pending mutations; File objections; Apply for Mutations etc.

More detail on PLRS Software Application is given in RFP Volume 1, Annexure Z.

### 1.1.3 PRISM Software for Registration System

Property Registration Information System Module (PRISM) is an automated application developed by National Informatics Center (NIC) for the State of Punjab. PRISM facilitates the process of registration at an enhanced speed and efficiency at the Sub Registrar Offices, across the state. The application is built with strong focus on ease of usage, simplicity and sound security & controls. A replicable and scalable application suite, the software:

- covers the registration process for different documents for registration
- integrates registration, valuation, scan and archives modules
- generates appropriate reports
- introduces service level integrators for return of original documents within a specified time frame
- incorporates reengineered processes
- introduces enhanced security by inclusion of biometrics introduces enhanced methods by inclusion of digital photograph

The functionalities of the application are in consonance with the objectives of the system. The main objectives of using and implementing PRISM is to introduce greater transparency, to ascertain accurate valuation of property, to speed up the process of registration and to introduce improved methods of storage for registered documents. Last but not the least; it aims at reducing citizen's harassment during registration and increasing faith and trust in the system.

PRISM has provided innovative approach to computerize the routine activities performed by the Deed Writers to demystify the entire gamut of activities. The module is called Deed Writer Module and can be used by the Deed Writers through the dedicated terminals provided at each SRO to enable the Deed Writer to fill in the party and property specific details by choosing the relevant deed-template from the available formats of registering various types of documents / deeds to simplify the process. The deed writers can be provided with User IDs and Passwords for ensuring Access Controls.



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PRISM has incorporated certain improvements over and above the computerization of the registration process workflow. Specifically, it has focused on reducing impersonation in the process, reducing errors in data entry and improving the user experience in the SRO.

In PRISM, photographs of concerned parties and witnesses are captured on spot in person and endorsements along with photographs are printed on the deed. The photographs so captured are stored in database in secured manner. This avoids frauds related to impersonation/change of photographs for the government and also citizens are benefited as they do not have to carry the photographs. The endorsements are computerized and carry all the details.

The valuation of the property is done on the spot with PRISM by dividing the whole jurisdiction into various segments having government defined different rates thus plugging the revenue leakage. PRISM maintains database of market value of segments of habitations depending on type/sub-type of properties both urban as well as rural.

To avoid any mistakes checklist is generated before finalizing the deed to cross-verify the details. All the activities including acceptance of cash, issue of cash receipt with details are performed on single counter to provide convenience of delivery of services. Computation of stamp duty, registration fee/fines etc is done through computer which avoids mistakes and also provide convenience to the registration staff to carry out work in an efficient manner. The departmental internal reports and index registers can be generated from PRISM.

Other salient features of the PRISM include user interface in local language i.e. Punjab and English; facility for predefined checks for supporting documents to ensure rejection of incomplete documents on presentation; Scanning and archiving of registered documents; automated valuation of property. Security of the system is given paramount importance in this application. Provision for auto checks for the availability of requisite hardware components on system startup; application level user-id and password is mandatory for the usage; changes are not permitted in data after completion of registration; biometrics is used for better identification and security; transaction audit trails logging date and time of access is inbuilt in the application. Application also provides facility for incorporation of need based user privileges. Also the scanned images are encrypted and stored in read-only mode.



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Director



only form. Feature of time synchronization between scanning and registration PCs via database clock to prevent the misuse of system time that can be manipulated by the user.

### 1.1.4 Proposed Processes

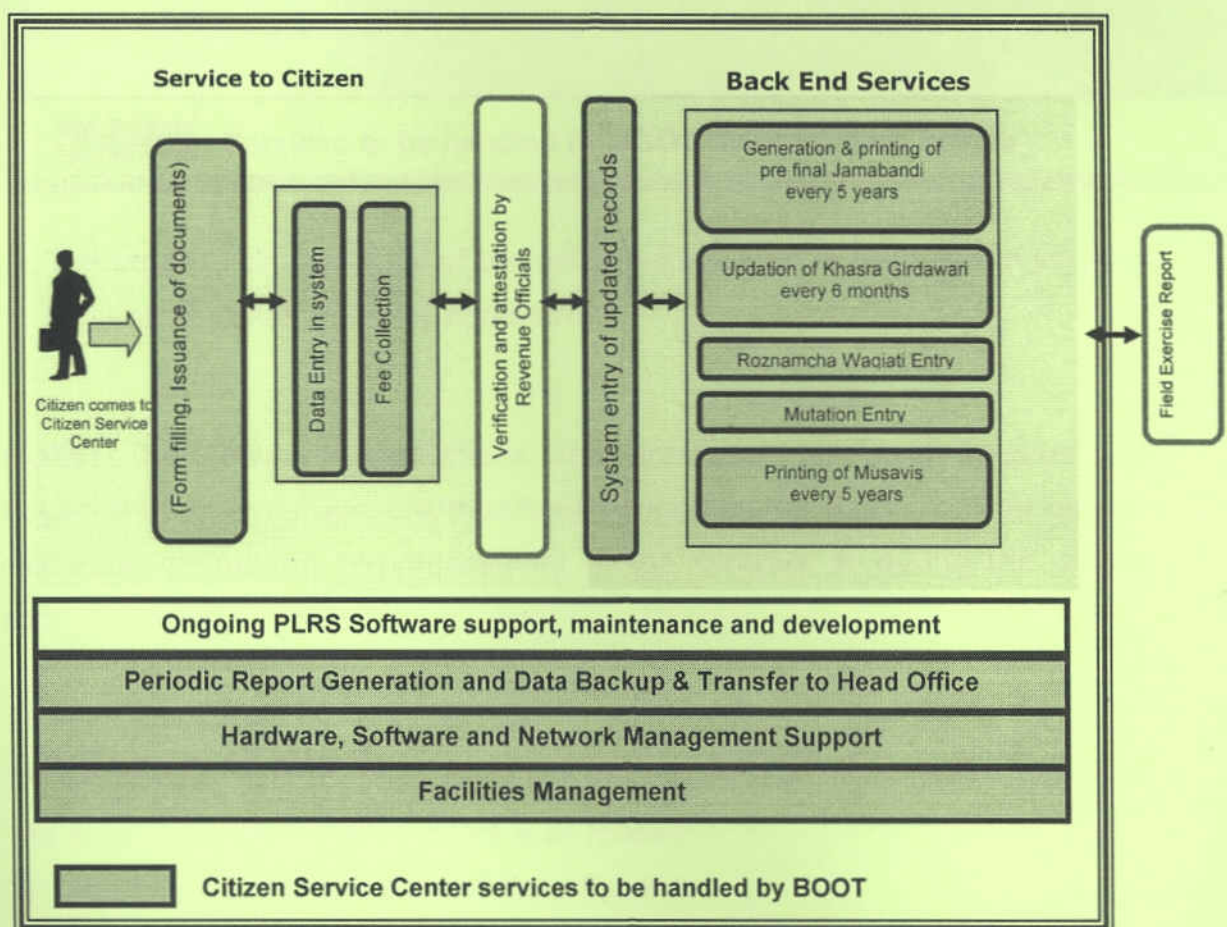
Tehsil/Sub-Tehsil offices handle the bulk of the citizen facing functions related to Land Records management and Registration System. The service categorization can be broadly divided into two major areas:

1. Services that are rendered to citizens
2. Services that are performed within Department that support the service delivery function to the citizens

Tehsil/Sub-Tehsil office provides a variety of services to its stakeholders. The high level services along the above classification are listed hereunder. The high level services along the above classification are listed hereunder.

### Land Records Management System Process:

The following describes a brief outline of the operations envisaged in the land records office:



The detailed process flow of the activities involved in each of the services is detailed in RFP Volume 1, Annexure 8. For CMS Computers Ltd.



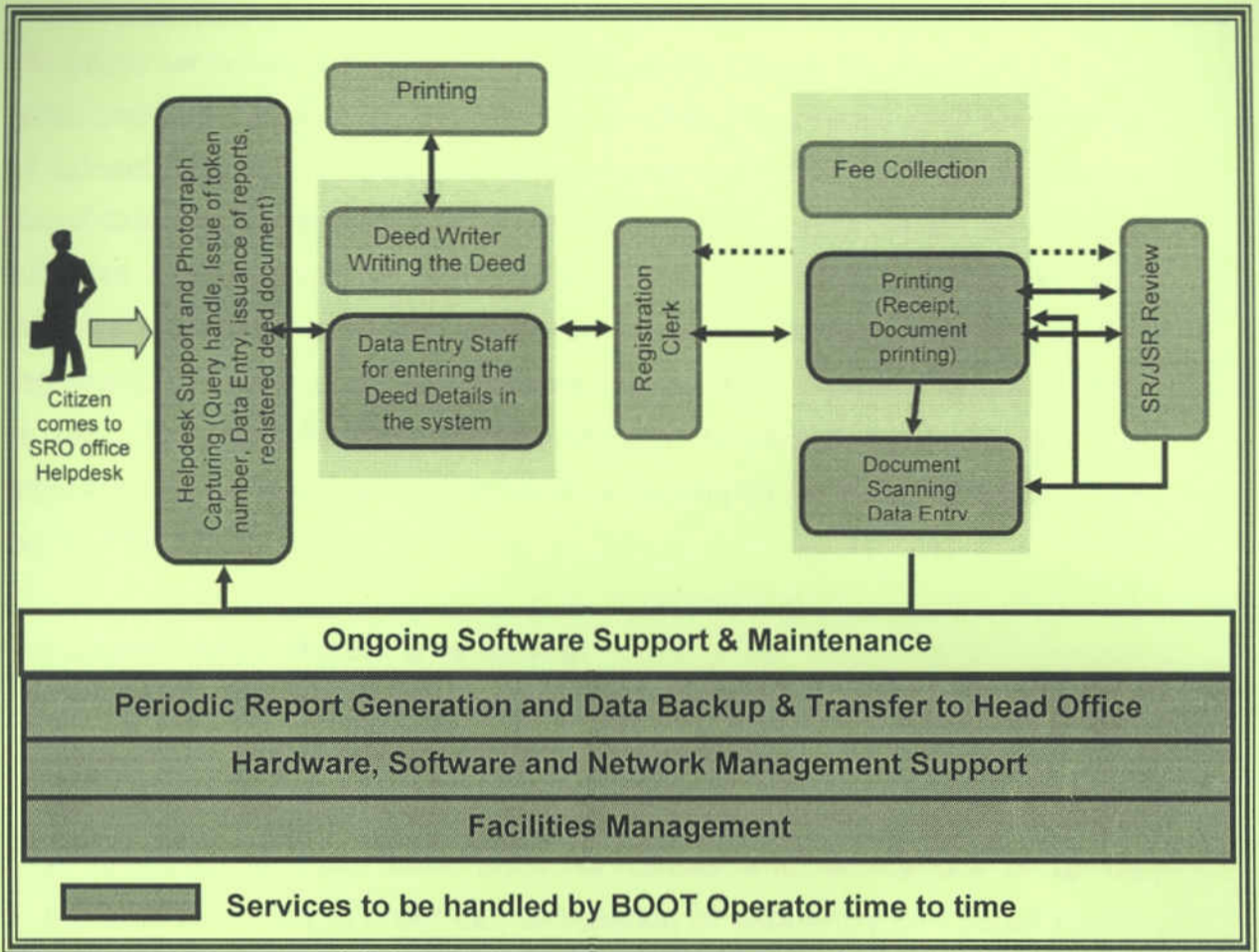
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Director



**Registration System Process:**

The following describes a brief outline of the operations envisaged in the registration offices:



The detailed process flow of the activities involved in each of the services is detailed in RFP Volume, Annexure 8.

**NOTE:** The software applications and processes for Land Records and Registration may be updated/modified/changed by the State/PLRS at its own discretion before the commencement of the contract or during the project contract period.

**1.2 Scope of Work**

The scope of work for this project is as follows:

- 1) Data Entry and Digitisation of Land Records
- 2) Establishment of Infrastructure for Citizen Service Centres
- 3) Procurement of IT hardware on upfront payment basis for Citizen Service Centres.



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For **CMS Computers Ltd.**  
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**Director.**



- 4) Provision of Services at Citizen Service Centres at 136 locations in across the state:
  - a) O&M for provision of Registration Services
  - b) O&M for provision of Land Records Services
- 5) Operationalisation of State Data Centre (At option of PLRS)

The implementation unit chosen for establishing Citizen Service Centers is at Tehsil and Sub-Tehsil level. Each centre at tehsil / sub-tehsil shall function as an independent unit. The data at all the centers at tehsil / sub-tehsil shall be consolidated at State Data Center as and when it is established for various purposes like Disaster Recovery, MIS reports etc. PLRS has selected two software applications to be used for statewide computerisation of the Registration System and Land Records Management System. Application to be used for Land Records Management is developed by PLRS and the application to be used for Registration is developed by National Informatics Center (NIC).

The detailed scope of work is as follows:

### 1. Data Entry and Digitisation of Land Records

Data entry shall be started in all districts in each division simultaneously. Within each district, data entry of tehsils and sub-tehsils is to be performed in a serial order i.e., completion of data entry of 1 tehsil / sub-tehsil will lead to start of data entry of next tehsil / sub-tehsil. However, data entry of more than one Tehsil or data entry at two locations may simultaneously be undertaken in the districts where district administration is able to provide additional space etc.

The operator would be required to carry out the data entry for the following records:

- (i) Shajra Nasb (Pedigree table) - The Shajra Nasab from the last Jamabandi of the respective village is to be entered.
- (ii) Jamabandi - The latest Jamabandi of the village has to be entered.
- (iii) Mutation - The data entry for mutation register for the existing period. i.e. all mutations carried out from previous Jamabandi and which are appearing in the remarks columns are required to be entered. Accordingly, each village may have mutation

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records from one year to five year based on the Daur for the respective village.

- (iv) Roznamcha Waqiyati - The scope for data entry would include all entries which are relevant and required to be recorded in the remarks column of the Jamabandi.
- (v) Khasra Girdawari - The Girdawari entries are to be entered for all seasons for Jamabandi period. The entries for number of seasons that are required to be entered will vary from one season to ten seasons depending on the daur of Jamabandi. As it is envisaged that the first six columns of the Girdawari would be available from the Jamabandi entry, the data entry requirement will be limited to the crop, the cultivator and means of irrigation. It is also observed that usually there is only 20% change in the data for subsequent seasons with rest of the data remaining same.
- (vi) Field Book - To enter the field book which gives details of dimensions of each Khasra of the village.
- (vii) Cadastral Maps / Musavis - To digitize the cadastral maps per village. A scanner of appropriate size and configuration may be required for the process of digitizing musavis.

The detailed data entry and validation process is defined in section 2.1.4 of Volume 1 of the RFP. The scope of work for data entry will be inclusive of the first time data entry and all the subsequent copies after error corrections/validation from the Patwari, Kanungo and the CRO.

The operator would be responsible to provide all necessary consumables including stationary for print outs for verification. For data entry purpose District Administration/PLRS will provide data entry module of the PLRS Application, manual records and will provide space (premises) with appropriate ventilation, normal electricity connection and lighting. All the other requisite resources and running expenses for data entry including, but, not limited to manpower, hardware, software licenses shall be arranged by the Operator at its own cost. The operator would require arranging for back-up power including generator to avoid work disruptions due to power shortage. The operator would require porting the verified data into the Tehsil Server and a copy of the data on a CD should be sent to DLR office.

For GMS Computers Ltd:

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The minimum quality of fanfold stationery as mentioned in Annexure-2 of Volume 1 of RFP will be 80 GSM for all internal processes or intermediate printouts (for validation etc) and 100 GSM for creation of New Jamabandi, Khasra Girdawari and other register and issue of nakals. In other words 80 GSM is required for all intermediate printouts and 100 GSM for all final printouts.

Two printouts of mussavi would be required while digitizing the mussavi of a village. The first printout could be done on 80 GSM sheet while the final printout to be handed to the patwari shall be taken on tracing cloth sample already displayed and shown to the bidders. It may be noted that after end of five year the printout to the patwari shall also be given on tracing cloth.

It is preferable that the Data Entry Operators have knowledge of complete Revenue System of Punjab and understand all the government notations involved in the process.

The Hardware for the data entry involved will be the sole responsibility of the operator including any additional/special Software for Data Entry purpose which will be borne by the operator at its own licensing cost. All software licenses for the purpose of data entry are to be arranged by the operator. The operator will be responsible for the LAN connectivity in the premises of the Data Entry.

The Operator is expected to prepare a data entry plan prior to commencement of this job and get it approved from the respective district administration. The district administration / PLRS reserve the right to formulate the plan and the same shall be implemented by the Operator. It is expected that the Operator would carry out data entry in such a manner that every Tehsil which is taken for data entry is completed on average within six months from commencement.

The Operator would require arranging minimum of 60 data entry operators per district to carry out data entry for twelve to sixteen hours a day for speedy completion. The Operator might be required to undertake data entry simultaneously at more than one location in bigger districts as desired by PLRS.



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For GMS Computers Ltd.  
 Director.





Punjab Land Records Society / Deputy Commissioner shall provide data entry module of application software and appropriate training on the Application Software along with revenue related training, which will be used during the data entry process to operator's data entry / operations staff. The training shall be imparted only one time. Operator shall further train it's staff at it's own level.

Please refer Annexure 5A for Tehsil-wise information on Record volumes.

The tentative data entry tehsil/sub-tehsil wise schedule is as follows:

Tentative Tehsil/Sub-tehsil wise Data Entry Plan				
Category	Year 1	Year 2	Year 3	Total (Class-wise)
Super A		1	3	4
A	1	4	2	7
B	14	18	1	33
C	36	7		43
D	49			49
<b>TOTAL</b>	<b>100</b>	<b>30</b>	<b>6</b>	<b>136</b>

S.No	District	Tehsil/Sub-tehsil	No. of calendar days required to complete Data Entry & Digitisation
1.	Jalandhar	Kartarpur	118
2.	Jalandhar	Bhogpur	170
3.	Jalandhar	Adampur	191
4.	Jalandhar	Goraya	224
5.	Jalandhar	Phillaur	267
6.	Jalandhar	Noormehal	332
7.	Jalandhar	Shahkot	420
8.	Jalandhar	Jalandhar-2	467
9.	Jalandhar	Nakodar	540
10.	Jalandhar	Jalandhar-1	670
11.	Gurdaspur	Bamial	14
12.	Gurdaspur	Narot Jaimal Singh	39
13.	Gurdaspur	Dhar Kalan	73
14.	Gurdaspur	F.Garh Churrian	97
15.	Gurdaspur	Nushera Maza Singh	108
16.	Gurdaspur	Kalanaur	132
17.	Gurdaspur	Dhariwal	152
18.	Gurdaspur	Qadian	183
19.	Gurdaspur	Dinanagar	210
20.	Gurdaspur	Dera Baba Nanak	223
21.	Gurdaspur	Kahnuwan	240
22.	Gurdaspur	Sri Hargobinpur	287
23.	Gurdaspur	Batala	321
24.	Gurdaspur	Gurdaspur	388
25.	Gurdaspur	Pathankot	568



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