

**DIRECTORATE OF INCOME-TAX (SYSTEMS)
INCOME-TAX DEPARTMENT
GOVERNMENT OF INDIA
NEW DELHI**

**INVITATION FOR EXPRESSION OF INTEREST
F. No. : oPAN/1/11/2008**

**Expression of Interest (EOI) for Selection of Service Provider (SP)
for End to End Implementation of Biometric enabled PAN
Issuance System**

JANUARY 2009

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Invitation for Expression of Interest

1. This is an invitation for submission of Expression of Interest (EOI) from Service Provider (SP) for end to end implementation of PAN (Permanent Account Number) issuance system along with implementation of Multimodal Biometric Solution for duplicate matching. The basic objective of this initiative is to ensure uniqueness of PAN holders within the Income Tax System in the country and to avoid / eliminate issuance of more than one PAN to one individual.
2. The project would involve hiring of Service Provider (SP) that will implement the proposed system as well operate and maintain it. It is to be emphasized here that Income Tax Department (ITD) is looking at this engagement as a complete set of services provided as per the Scope of Work for Service Provider section. Response forms to be provided by the Bidder are provided in **Annexe A**. Details of pre-qualification criteria are available in Details of Tender section.
3. The details on current infrastructure & present system of PAN issuance are available in Current Environment section.
4. This document should not be construed as Tender / Request for Proposal (RFP) in any form and would not be binding on ITD in any manner whatsoever.
5. Bidders are advised to study the EOI document carefully. Submission of EOI shall be deemed to have been done after careful study and examination of the EOI Document with full understanding of its implications.
6. The EOI document can be obtained by making a payment of Rs. 5000 (Five thousand only) in the form of bank draft during working hours on all working days at the office address from start date till last date as prescribed in clause 13. The EOI document can also be downloaded from the website (www.incometaxgov.in). In such case, the cost of EOI document should be remitted in the form of demand draft enclosed with response to EOI document. All Bank Draft should be drawn in favor of "The Accounts Officer, Zonal Accounts Office, Central Board of Direct Taxes, New Delhi" and payable at "New Delhi. Please note that the EOI response of a bidder would not be entertained in case the cost of EOI document is not paid by them as per the details mentioned above.
7. All EOI documents must be accompanied by a **Bid security form (Annexe B)** along with a Bank Guarantee of Rs. 10,00,000 (Ten Lakhs Only) ,and should be as per the details of clause 2 of Details of Tender section.
8. Sealed EOI response prepared in accordance with the procedures enumerated in EOI document along with EMD and cost of EOI, in case downloaded, should be submitted to the Director of Income Tax (Systems)-I not later than the date and time laid down, at his address given in the Schedule for Invitation to EOI under Clause 13.
9. This EOI document is not transferable.

10. The EOI should not be used by bidders to market their Product or Services.
11. ITD reserves the right to qualify or disqualify any or all application without assigning any reasons
12. ITD reserves the right to update, amend and supplement the information in EOI document including qualification process at its discretion but before the date of submission of response to EOI as per clause 13 below
13. Schedule for Invitation to EOI

S.No	Items of Information	Information
a)	Name of the Purchaser	President of India acting through Director of Income Tax (Systems)-I.
b)	Addressee and Address at which EOI can be obtained/ to be submitted	Director of Income Tax (Systems)-I, Directorate of Income Tax (Systems), A.R.A Centre, Ground Floor, E-2, Jhandewalan Extension, New Delhi – 110055
c)	Latest time and date for receipt of EOI	On or before 14:00 hrs on <u>23/02/2009</u>
d)	Place, Time and Date of opening of response to EOI	Office of the Director of Income Tax (Systems)-I, Directorate of Income Tax (Systems), A.R.A. Centre, Ground Floor, E-2, Jhandewalan Ext., New Delhi – 110055 at 15:30 hours on <u>23/02/2009</u>
e)	Name of the contact person for any clarification	Shri N. C. Mohanty, Director of Income Tax (Systems)-I ARA Centre, E-2, Jhandewalan Extension, New Delhi – 110055 Tel No. +91 11 23524261 , +91 11 23593092 Fax : +91 11 23524261 E-mail: dit1.systems@incometax.gov.in adldit.pan@incometaxindia.gov.in
f)	Date of Project briefing session	<u>04/02/2009 time 11:00am</u>
g)	Last date for clarifications	<u>09/02/2009, The address for requesting clarifications is at s.no (e) above</u>
h)	Date till which the EOI response should be valid	180 days from the date of opening of response of EOI documents

Details of Tender

1. Tender Methodology

The tender methodology proposed to be adopted will be in two stages comprising of Expression of Interest in the first stage. The second stage of tendering process will comprise of inviting techno-commercial bids by issuance of request for proposal (RFP) to shortlisted bidders on the basis of pre-qualification criteria mentioned further in this section. The process also envisages conducting a Proof of Concept(POC) to demonstrate the performance of the Solution and Pilot for a defined period of time. The details of POC and Pilot would be supplied as part of RFP.

2. Earnest Money Deposit(EMD)

An EMD of Rs. 10,00,000 (Rupees Ten Lakh only) in form of a bank guarantee issued by a Nationalized / Scheduled Bank valid for 60 days beyond the validity period of the EOI , in the pro-forma provided as Annexe B, should be submitted along with the EOI response. The EMD of the unsuccessful bidders would be returned back within one month of issuing of RFP to successful bidders. In case of successful bidders, the bank guarantee would remain in force till RFP evaluation process is complete, Accordingly, the successful bidders may have to extend till such time.

3. Consortium Approach

Considering the wide variety of skills and resources needed to implement the PAN issuance Project, a group of Companies are allowed to come together and bid for this project as a consortium. The Bidder should necessarily satisfy the pre-qualification criteria's of Service Provider (SP) and Biometric Solution Provider (BSP). The following must be noted with respect to consortium bids:

- (i) The prime bidder should be the Service Provider (SP) & shall be the prime point of contact between the Consortium members and the Purchaser and shall be primarily responsible for the discharge and administration of all the obligations for this project. The sole responsibility under the contract would be that of the prime bidder only.
- (ii) The no. of consortium members can not exceed three, including the prime bidder.
- (iii) An authorized representative of the Bidder (Prime bidder in case of consortium) shall initial all pages of the EOI response. The authorization shall be in the form of a written power of attorney accompanying the response or in any other form demonstrating that the representative has been duly authorized to sign. In case of consortium, each consortium member should furnish an authority letter in favour of the prime bidder, authorizing to submit and sign the EOI response.

- (iv) The bidder participating with consortium approach shall briefly define the role of each consortium partner in its EOI response clearly indicating their scope of work/responsibilities and relationship
- (v) The combination of consortium members, if short listed after EOI stage can not be changed at RFP stage and will be considered a disqualification for all concerned consortium(s) applying to this bid. At the stage of RFP , The prime bidder shall be required to submit a joint Memorandum of Understanding (MOU) between the consortium member(s) for the contract .Moreover the prime bidder is required to submit a draft of the MOU between the consortium partners in response to this EOI.
- (vi) The prime bidder cannot be a member of any other consortium for the purpose of this tender. Participation by Prime bidder to more than one consortium will be considered a disqualification for all concerned consortium(s) applying to this bid
- (vii) The prime bidder should confirm unconditional acceptance of full responsibility for executing the 'Scope of Work' and meeting all obligations of the project. The confirmation should be furnished as part of the EOI response

4. Pre-Qualification Criteria

The EOI response envelopes of only those bidders, whose EMD and bid processing fees are in order, shall be opened in the same session. The bids will then be passed on to the Committee for Evaluation. The bidders will be assessed on the prequalification criteria. The bidders should clearly indicate, giving explicit documentary evidence with respect to the criteria. In absence of which, the response would be rejected summarily at pre-qualification stage.

The bidders will be assessed on the following prequalification criteria:

- (i) The Bidder (Prime Bidder in case of a consortium) should have been in operation for a period of at least 5 years as on 31-03-08, as evidenced by the Certificate of Incorporation and Certificate of Commencement of Business issued by the Registrar of Companies;
- (ii) The Bidder (Prime Bidder in case of a consortium) should have had a annual turnover of Rs. 750 crores and net worth of Rs. 50 Crores in last financial year. The bidder should submit duly certified statement from their appointed statutory auditor;
- (iii) The Bidder (Prime Bidder in case of a consortium) should have had a minimum annual turnover of Rs. 100 Crores in each year during the last 2 financial years (2006-07, 2007-08) from implementation of IT/ITES related projects, The bidder should submit duly certified statement from their appointed statutory auditor;
- (iv) The bidder (Prime Bidder in case of a consortium) should be ISO 9001:2000 certified evidenced by copy of certificate issued to bidder by respective agencies

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- (v) The Bidder (in case of consortium: Prime Bidder or respective member(s) whoever is responsible for Multi-modal Biometric based Identity Solution)
- a. Should be a provider of identity based solutions and services for last 5 years, evidenced by certificate of incorporation and Certificate of Commencement of Business issued by the Registrar of Companies/ Equivalent agency of respective country
 - b. Should have had a turnover of not less than Rs. 45 Crores or USD 10 million from Biometric Services in last financial year or as on 31-03-2008, evidenced by duly certified statement from their appointed statutory auditor
 - c. Should be legally allowed to implement and deploy the proposed multi-modal biometric identity solution(including underlying algorithms) for next 10 years evidenced by relevant documents
 - d. Should have at least one present installation where their solution is deployed on multi-modal biometric platform in 1:N matching way. All these projects should be evidenced by customer certification which is to be notarized/certified as per norms applicable in the customers' respective countries
- (vi) The bidder should provide information(s) as stipulated in **Annexure A** and conformance to the requirements stated in the EOI.

Current Environment

1. Overview

Income Tax department has authorized UTI Technology Services Ltd (UTITSL) and National Securities Depository Limited (NSDL) to set up and manage IT PAN Service Centers in all cities or towns where there is an Income Tax office. For convenience of PAN applicants in big cities, UTITSL and NSDL has set up more than one IT PAN Service Center. There are approximately 2400 front offices distributed across 530 cities/towns at present. Both have established nationwide service centers for acceptance of PAN applications,

2. PAN System of CBDT

PAN (Permanent Account Number) is a ten digit alpha-numeric number allotted by the Income-tax Department to taxpayers, specified persons and to anyone who applies for it. Income tax Act permits one person to have only one PAN. However, it has been noticed that several persons have obtained more than one PAN. ITD has decided to use biometric technology to capture certain biometric features of 'Individual' PAN applicants as additional attributes to aid in its endeavor to prevent allotment of more than one PAN to one person. Some other details of current PAN system are as follows:

- ❖ Applicants for PAN are required to submit an application in the prescribed form along with copies of prescribed documents as proof of identity and address to the front offices of the PAN service providers (SPs): M/s NSDL and M/s UTITSL. Both have developed the systems for digitization of PAN applications, uploading the electronic data to a central system for further processing, forwarding the data electronically to ITD in a batch form, receiving the allotted PAN from ITD, printing PAN Cards and distributing the same to the applicants. PAN applicants can also submit their application online, and then submit the required proofs by post to the service providers. Even non-residents can apply for a PAN. Personal presence of the applicant at the front office is not necessary. A card (PAN Card) containing PAN, photograph and certain personal details of PAN applicants is issued to applicants by M/s NSDL and M/s UTITSL after following processing and verifications by ITD . A fee of Rs.60/- (Rupees Sixty) plus service tax is charged for issue of a PAN card. M/s NSDL and M/s UTITSL are responsible to address the queries / grievances raised by the applicants. Both the service providers have set-up call centers for this purpose.
- ❖ PAN allotment is today a two-stage process within the department. The present PAN service provider, after collecting data from the front offices, sends an electronic request for allotment of PAN to the Regional Computer Centre (RCC) depending upon the

geographical address of the PAN applicant.

- ❖ 36 RCCs are located in different regions of the country. The RCC sends a PAN allotment request to the National Computer Centre (NCC) at New Delhi. A duplicate check program runs at NCC and allots PAN if no existing PAN is found, or reports an existing PAN to the RCC. For duplicate PAN cases, RCC resolves manually on case to case basis.
- ❖ The current application for PAN issuance has been designed, implemented and managed by M/s Tata Consultancy Services for more than last 10 years. The legacy application had been designed in distributed fashion assuming each RCC as a separate unit for carrying out their work and NCC as main custodian for PAN database. NCC is centralized in nature. The current application has undergone change and all the RCCs databases are being merged in a centralized system. At present, the consolidation activity is on-going and is expected to get completed by beginning of 2009.
- ❖ The consolidated RCC information along with NCC database would be hosted in PDC (primary data center) at Delhi. The infrastructure also consists of a business continuity process site at Mumbai and a disaster recovery site at Chennai: all at vastly separated locations. M/s IBM India Pvt Ltd has implemented and is managing the entire infrastructure since 2008.
- ❖ The remote ITD sites connect to centralized system via MPLS network through leased lines and VSAT. The entire networking is implemented and being maintained by consortium of Bharti India Pvt Ltd and IBM India Pvt Ltd.
- ❖ DIT uses in-house developed software programs to match the information in PAN application forms with existing PAN holders' information. While most of the applicants who are existing PAN holders are found in this manner, some do not get detected due to various reasons which include variation in the ways a person can give his personal information. The biometric solution will supplement the existing PAN processes. Biometric information, on the other hand, is more stable with time, difficult to change, and with appropriate technology, can be used to identify and/or verify a new applicant against the existing databank with much higher accuracy. The department, to begin with, intends to collect biometric information of only prospective PAN applicants and of existing PAN holders who apply for re-issue of cards. During the course of the project, old PAN card holders would also be enrolled into the new biometric based PAN system.

Scope of Work

1. Overview of Scope of Work

1.1. Overview of Requirements

It is desired to have a new end to end service provider for PAN issuance related services. The bidder would perform the end-to-end work for PAN related services enabled with multimodal biometric information of an applicant. The following outlines the broad areas of scope of work and the later sections highlight the detailed scope of work for SP in each of the following areas.

- ❖ Requirements analysis/Assessment, Provisioning and establishment of complete Infrastructure including IT & networking related setup for
 - a. Point of Service(POS) as PAN facilitation centers across India,
 - b. Data Center (DC) for hosting central ICT infrastructure,
 - c. Disaster Recovery Center (DRC)
 - d. PAN Card Printing Facility
 - e. PAN Call Center
- ❖ Multimodal Biometric Solution Design, Development/ Provisioning / Customization, and Installation, Data Integration with Existing Systems
- ❖ Operations & Maintenance of entire PAN issuance system environment (Manpower Deployment, Service delivery, Software & Hardware warranty & maintenance support) for **Five years post implementation**

ITD is not merely interested in establishing Data Centers and POS's equipped with best-of-breed hardware, software and networks. It is interested in the Outcomes i.e. PAN related services delivered in compliance with the Service Level Agreement (SLA). The SLAs would be provided as part of the RFP later on. The bidder is expected to build the financial model of the project (including infrastructure and operations related activities) using fees collection of PAN card applications. The penalties to the bidder would be linked tightly to the compliance with the SLA.

2. Scope of Work in Detail

2.1. Setting up of Point of Service(POS)

The bidder shall Setup the **Fixed Points of Service (POS)** locations within country as per the list of locations. The bidder will be responsible for entire setup for POS. The bidder shall also provide staff in sufficient numbers to man the PAN application counters (PAN application related services (New/ Renewal), reception/enquiry, token issuance etc.) at POSs.

It is expected that processing of each application including capture of biometric for each applicant not to be more than 30 minutes. Further, while the number of counters provided above will be based on the estimated transaction volumes at each center, it is assumed that in-flow of applicants will not be the same at each hour of the day and there will be peak and non-peak hours. So, the bidder might have to dynamically adjust the number of active counters as per the need of the hour to meet specified SLA's.

The bidder shall also provision for fully equipped **mobile POS**, enabling offline way of capture & save PAN card information in a secure way. The captured information can then be transferred to centralized Datacenters once the capture device is connected back to the PAN network. The mobile POS should be able to work in the extreme Indian weather conditions (Heat, Cold, Humid, Dust, Sand etc). In order to increase the compliances of PAN, the bidder can provide 'PAN application at your door-step' or similar service so that applicant need not come to fixed POS. However, the bidder needs to ensure the security and safety of the applicant's data and documents, while it is in offline mode.

The bidder should propose the ratio of Fixed POS and mobile POS to address the load in effective manner and within stipulated SLA. The bidder should also propose the SLA for mobile POS.

2.2. Design/Customize Multimodal Biometric Solution

The bidder should

- ❖ Design/customize solution to provide enrolment service at POS. The enrolment service should consist of capture of following information of a PAN applicant:
 - Biographical data (Fields as per current PAN application form i.e. Form 49A)
 - Fingerprints (4 fingers, 2 fingers from each hand)
 - Facial Image
 - Digital image of Application & Proof Documents
- ❖ Design/ customize 1: N matching solution for multi-modal biometric resolution for finger, face recognition as well as design/ customize solution for identity resolution using Biographical information. The maximum time limit for identity resolution activity for a PAN application is 16 hours.
- ❖ if no duplicates are found in the system then only the PAN issuance process can be triggered
- ❖ Propose various soft biometric techniques to improve the efficiency of 1:N multimodal biometric search.
- ❖ Provision for the biometric engine to upgrade to future technology without requirement of recalling the individual for a fresh capture of biometric details
 - More efficient search algorithms,
 - Better biometric devices or hardware
- ❖ Provision for storage of PAN related data in their native form in secured database at a location identified by ITD
- ❖ Provision for storage of PAN related data in a secured database. Only Authorized access should be provided for this database,

2.3. Establishment of Infrastructure (Data Center , Disaster Recovery, Network)

The Bidder Should provide

- ❖ A Tier-III type of data center(DC) for hosting of entire solution at a location in India.
- ❖ A disaster recovery center(DRC) in a different city preferably in different seismic zone than DC with connectivity to DC.
- ❖ Proper connectivity of POS locations with data center and Disaster recovery center should also be provisioned.
- ❖ Supply, Installation, Warranty & Maintenance of the infrastructure (Solution, Servers, Storage, Security devices) at DC and DRC
- ❖ Secured transmission of data over network to various POS locations and Data Center. The bidder should design the network to suffice project requirements and It is essential for bidders to submit the tentative networking strategy for connecting POS and Data centers as part of EOI response

2.4. Integration with existing PAN issuance application of ITD

- ❖ The bidder should provide Integration with the existing PAN issuance application system of ITD. The proposed solution should integrate with the existing application without significant modifications to the existing system. This may mean flexibility to be inbuilt in the solution by providing additional database calls / messaging & File exchange etc. Solution providers are required to keep this factor in consideration while proposing the solution
 - Integration Architecture Document
 - Technical Document for using Libraries /Integration APIs

2.5. Printing and Dispatching of PAN Card

At the end of PAN issuance process, The Bidder would be responsible for printing & dispatching of PAN Cards to the applicant address. In the present scope of project, the PAN card to be printed should be similar to the printed PAN card getting issued by NSDL & UTITSL. The bidder are required to get familiarized with the details printed on the current PAN card & should manage the entire process of printing and dispatching of PAN cards. The bidder is responsible of delivery of PAN Card at Applicant's address and updating of delivery status in the system.

2.6. Establishment and Management of Call Centre

A centralized Call Centre is proposed to be established for providing voice-based assistance to the citizens for PAN related matters. Citizens should be able to make enquiries, register their complaints and grievances, and track their application/ complaint status.

In case of Public grievance redressal through call centers, the bidder should setup a national helpline number. The call should then be automatically transferred to the grievance handling

operator at the call centre. The bidder should ensure that the call centre infrastructure should be designed for call to be answered within 3 rings.

2.7. Development & hosting of Web based Tracking & Grievance handling Application

The bidder should establish & maintain an Internet based interactive site for PAN related matters. This site should provide guidance to the citizens on the procedure and forms, besides enabling them to transact with ITD for a variety of services, including tracking status and registering grievances. The bidders are free to suggest other services that can be hosted on site in secured manner.

2.8. Deployment of Manpower

- ❖ The manpower shall be deployed by the bidder for executing operations, management and maintenance of the POS's, as per terms to be specified in RFP and agreed with ITD
- ❖ The POS operators should be fluent in English, Hindi and/or local language of the respective state where a POS is situated and should have relevant computer skills
- ❖ The bidder shall train the POS operators about capturing methods of biometric data of an applicant and ensure that the quality level of captured data matches with overall expectation of system and SLA
- ❖ The bidder shall place good experienced technical staff to manage & carry out day to day operations at DC and DRC including multi modal solution & web based tracking application.
- ❖ The bidder should provision adequate manpower for manning the call center

2.9. Operation & Ongoing Maintenance of entire system

The bidder shall provide operational support, administration support and maintenance services for a period of **5 Years post implementation** of the solution for overall operations and maintenance at POS's, DC, DRC, web application administration, system administration, security administration, database administration, network administration, call center and end-user problem resolution. The operational support will have to ensure that the PAN system is functioning as intended and meeting all the desired SLAs. The call center application, SMS PAN status check and web based tracking should provide a unified view of end user queries /their status to the stakeholders.

Important Aspects of Desired Solution

1. Biometric Solution

- ❖ The biometric engine should be „standards based and key features should include; score based matching, matcher abstraction, security, vendor neutrality and scalability
- ❖ It has been decided to capture biometric scan of four fingers (Two of each hand) and face of applicant for the biometric solution for PAN cards.
- ❖ The fingerprint biometric shall include plain impression of the data collected from a minimum of four fingers. The rules for selecting the fingerprints to be considered in case of exceptions would be prescribed. Vendor should incorporate technology to determine which finger and which hand the fingerprint belonged to.
- ❖ The solution should be able to cater to situations where biometric features could not be captured due to various reasons, like old and infirm persons, persons with one or no hands, children, technological limitations, etc
- ❖ Biometric data collected should be stored in their original image format. The solution should allow the system to automatically generate templates on demand for using other algorithms or to evaluate new algorithm performance on stored data. In case the images are encrypted for security, the keys and algorithm should be available so that there is no limitation for use of the same even in future under any eventuality
- ❖ Original captured images may be appropriately compressed using published loss-less compression algorithm for optimization of storage and transmission. However, compression should not lead to losing critical information of the image, reducing quality of image, rendering it useless for re-computation of Biometric digest (code used for matching). The Key used for compression should be in ownership with ITD.
- ❖ The ITD requires that all recipients of the PAN card should be able to get enrolled with biometric data. Failure to enroll using one mode because of physical disabilities or other reasons should be addressed. The handling of persons who are unable to enroll with any or no biometric (either at enrolment or in operation) should be supported in a secure manner. The bidder should plan for this scenario while designing the solution
- ❖ At all times, data should be secured either at POS or central system's database. The system should ensure that the biometric information stored in database should be stored in encrypted format and even DBA can't have the access of biometric information directly through database. It should be possible to view the biometric data only through the application, after applying decryption logic. Data captured at POS/mobile POS end has to be secured and tamperproof before it is securely transmitted to DC. The provision of digitally signing the captured data may have to be kept, with the facility to plug in / plug out the digital signature routines.
- ❖ Appropriate Audit trail should be created, stored and managed for every PAN enrolment and other important activities.

2. Scalability

The proposed solution architecture should be scalable to accommodate more users, more transactions and more data as additional users and data are added in the future. The system should be scalable across hardware, software, and applications in both horizontal and vertical dimensions to meet the load requirements of future. The solution architecture should be horizontal and vertical scalable.

3. Indicative Load

The indicative load of the system is as follows.

- ❖ Peak Daily Volume expected: 100,000 /day
- ❖ Total Registered PAN records: 7 Crores
- ❖ New Registration per Year (biometric capture subjects): 1.2 Crores
- ❖ Time limit of issuance process per new PAN card: 20 days

3. Availability

The solution should be designed for high-availability with no single point of failure and at least 99% uptime and Storage infrastructure design along with replication and backup strategies.

- ❖ Availability of PAN Application related services of ALL POS for 10 hrs/day, 6 days a week should be >99%
- ❖ Availability of Multimodal Matching systems at DC and DRC should be 100%
- ❖ Availability of Security Solution at DC and DRC should be 100%
- ❖ Availability of Call center agents at call center for 10 hrs/day, 6 days a week > 99%
- ❖ Availability of PAN tracking related services over Internet should be >99%

4. Interoperability

4.1. Biometric devices

The ability to support multiple acquisition devices seamlessly is critical. It should be possible to add other major biometric techniques and their device vendors, which could be added in the future as required. The bidders should design the solution in a way that interoperability can be achieved between multiple acquisition devices

4.2. Algorithm

The proposed solution should Support for different/multiple matching algorithms and biometric type, which could be added in the future, if required. The bidder should design the solution in a way that interoperability can be achieved for multiple biometrics and matching algorithms.

4.3. Hardware

The proposed solution should support different/multiple hardware vendors making the solution cost effective to deploy and maintain. The solution should also take advantage of ongoing advances in processor technologies with minimal disruption.

5. Flexibility

- ❖ The proposed solution should be designed in a way that it is possible to plug-in and plug-out components. As, the project lifetime will be more than 10 years and technology components would change including devices, software, hardware, algorithms etc. so the flexibility and openness should be essential features required in the solution.
- ❖ The solution should be provided on vendor neutral hardware and open device
- ❖ The solution should be open to adapt to any change in business process
- ❖ The solution should support the Service oriented Architecture (**SOA**).

6. Desired Features of Biometric Related Components

For Standard biometric interfaces and to provide interoperability between biometric components and subsystems, the BioAPI 2.0 specification which defines a standardized interface for using biometric devices, algorithms, and archives shall be adhered to. The objective is to provide complete flexibility with respect to biometric devices, algorithms, modes (fingerprint, face) and other related components.

6.1. Standard compliance

- ICAO NTWG Biometrics Deployment of Machine Readable Travel Documents, Technical Report, Version 2.0, 05 May 2004.
- ISO/IEC 19794-4:2005, Biometric Data Interchange Formats – Part 4: Finger Image Data.
- ANSI/NIST-ITL 1-2000 Standard “Data Format for the Interchange of Fingerprint, Facial, Scar mark & Tattoo (SMT) Information”; FBI: Wavelet Scalar Quantization (WSQ).
- ANSI INCITS 358- 2002, Bio API Specification, <http://www.bioapi.org>.
- ISO/IEC 15444 – Information Technology – JPEG Image Coding System.
- Fingerprint Image Quality, NISTR 7151, August 2004.

6.2. Finger Print

- ❖ Fingerprints
 - Image Quality
 - Electronic images must be of sufficient quality to allow for: (i) conclusive fingerprint comparisons (identification or non-identification decision); (ii) fingerprint classification; (iii) automatic feature detection; and (iv) overall Automated Fingerprint Identification System (AFIS) search reliability.
 - There are two factors in collecting quality finger images: the collection device performance and the actual quality of each image collection in terms of repeatability and consistency needed for successful matching processes.
 - Image Collection Device
 - Finger live-scan collection devices shall conform to the specification sets for performance standards on finger image scanners for resolution, geometric image accuracy, modulation transfer function, signal-to-noise ratio, grayscale range, grayscale linearity, and grayscale uniformity. The biometric fingerprint scanner that would be used for the solution has been decided to be of 500

dpi resolution.

- Image Collection Result
 - The imaging of the finger pattern shall result in an image in which the core of the pattern is positioned within 25% of the image centre. The ridge pattern shall be clearly visible (smudge-free) with differentiable ridges and valleys for the entire area around the core.
- Data Format
 - Finger image data shall be stored and interchanged using the data format specified in ANSI/NIST-CSL1-1993 "Data Format for the Interchange of Fingerprint Information". The configuration of the data shall include Transaction information, User-Defined Text, and Fingerprint image data (high-resolution grayscale).
- Compression and Data Format
 - The average compression ratio applied shall not be greater than 15:1.
 - Finger image data shall be stored and interchanged using the data format specified in ANSI/NIST-CSL1-1993 "Data Format for the Interchange of Fingerprint Information". The configuration of the data shall include Transaction information, User-Defined Text, and Fingerprint image data (high-resolution grayscale).
 - NOTE: Because different Fingerprint Information Standards use minutiae and potentially use other features extracted from the finger image to improve speed and performance, interchange shall be accomplished using finger images, not minutiae data, so that the best possible matching performance can be achieved.
- Minutiae Extraction and Other Features
 - For the purposes of one-to-one verification of an individual's identity against a previously collected and stored finger record, the interoperability is based on defining the finger minutiae extraction rules and record format that are common to most all finger matchers for acceptable matching accuracy, while allowing for proprietary data to be attached so that the highest accuracy can be maintained for matching accomplished with the same matcher type. The External Standards are referenced as per ANSI INCITS 358-2002 Information technology - BioAPI Specification.
 - The other features to such as minutiae format, extraction etc. also need to be considered.
- Finger Print Capture System
 - Finger Capture Device : Optical/Silicon Sensor Based
 - Resolution : Minimum 500 DPI Image

- Active Sensor Area : Minimum 10mm X 14mm
- Sensor Area Size : Minimum 200 X 280 Pixels
- Interface to Host : USB/Com Port
- Supported Operating System : Windows XP, Windows 2000 and Linux
- Biometric Template : BMP, JPG, GIFF
- Supported development tool : Active-X (VB), Java Beans for finger image capture & Verification
- SDK : Development tool should give facility to store image in any industry standard neutral format without any data loss.

6.3. Facial

- ❖ The enrolment application will facilitate recording of a digital full frontal pose of applicants.
- ❖ The enrolment application will carry out quality checks to ensure the facial image meets specified standards (based on ISO/ICAO image standards) and has an auto capture function. Quality issues for facial images recorded will be recognised and the operator notified with the option to re-capture or bypass to next step.
- ❖ The facial recognition system must provide an interface that allows images from various sources to be uploaded/imported.
 - Web/intranet based image upload
 - Digital peripheral interface e.g. USB, CD ROM
 - Digitally resize a photo
 - Quality check and assure photo for searching suitability
 - Manually locate eye locations on the scanned image
 - Produce a normalized digital image prior to sending to store and search on the FR system
 - Provide search results in a respondent screen
 - Provide the ability to import images individually and in bulk
 - Provide a flexible management information capability
- ❖ The Supplier shall provide a system that will be able to check the image against agreed ICAO rules.
- ❖ For each point the Supplier shall state how their solution will meet / exceed the rule.
 - ❖ The image must be a close up of head and shoulders so that the Customer's face takes up 70-80% of the photograph;
 - ❖ The image must be sharp focus and clear;
 - ❖ The image must show the customer looking directly into the camera;
 - ❖ The image must show skin tones naturally;

- ❖ The image must show appropriate brightness and contrast;
- ❖ Image must be colour neutral;
- ❖ Image must show customers eyes wide open and clearly visible;
- ❖ Show customer facing square on to the camera, not looking over one shoulder (portrait style) or tilted, and showing both edges of the customer's face clearly;
- ❖ Image taken with a plain light coloured background
- ❖ Image taken with uniformed lighting and not show shadows or flash reflections on face or red eye;
- ❖ If customer wears glasses the image must show eyes clearly with no flash reflection off the glasses.

7. Desired Features of Card

7.1. Card

The tentative Specifications of PAN card are as follows:

i) Card	Ultra Card (PVC)
ii) Card Size	CR 80
iii) Card Thickness	Min. 0.040" (40 MIL) / 1.02 mm
iv) Print Matter	Both side full color printing including a water mark, overlay lamination.
v) Print Method	Dye-sublimation / Resin Thermal Transfer/Color Inkjet or comparable technology
vi) Security Features	Printed Card with "Custom designed" Transparent Security Image visible under UV Ray / Sun light in angle coated through 0.25 MIL Over-laminate
vi) Life cycle	10 years (For card as well as printing on the card)

The above specifications are tentative and minimum to be proposed by bidders. Bidders are advised to propose tentative specifications of card as part of their EOI response. Bidders may also suggest smart card as an option also providing details on extra infrastructure required in case smart card is selected.

Annexe A-Response to EOI

1. General Particulars to be provided by the Bidder

The bidder should provide the following particulars along with relevant supporting documentation.

- a. Full Name of the bidder/Prime bidder
- b. Mailing address in India
- c. Telephone and fax number
- d. E-mail address
- e. Name and designation of the person authorized to make commitments to the Directorate of Income Tax (Systems)
- f. Year of establishment and constitution of organization
- g. The details of the top management with their professional qualification and experience
- h. Description of business and business background
- i. Whether the Firm / Company has any widely accepted certification. If yes, furnish details.
- j. Profile of personnel with qualification & experience, who will be assigned to the project.
- k. Details of offices in India and number of technical manpower related with IT/ITES for each location
- l. The bidder should provide the following particulars along with relevant supporting documentation in case of a Consortium. The bidder should provide the following details separately for each consortium member.
 - i. Name of the Consortium company/firm
 - ii. Proposed role of the Consortium
 - iii. Mailing address
 - iv. Telephone and fax number
 - v. E-mail address
 - vi. Name and designation of the person authorized to make commitments to the Directorate of Income Tax (Systems)
 - vii. Year of establishment and constitution of organization
 - viii. The details of the top management with their professional qualification and experience
 - ix. Description of business and business background
 - x. Whether the Firm / Company has any widely accepted certification. If yes, furnish details.
 - xi. Profile of personnel with qualification & experience, who will be assigned to the project.

- xii. Details of offices in India and number of technical manpower related with IT/ITES for each location
- xiii. Details of project of undertaken by the consortium member in a similar capacity (Minimum up to three projects recently executed)
 - 1. Organization name and nature of business
 - 2. The role performed by the consortium member
- m. The bidder should provide proof of pre-qualification criteria's

S.No	Description	Proof
1.	Proof of Bidder in operation for a period of at least 5 years as on 31-03-08	Certificate of Incorporation and Certificate of Commencement of Business issued by the Registrar of Companies
2.	Proof of Bidder having annual turnover of Rs. 750 crores and net worth of Rs. 50 Crores in last financial year.	Duly certified statement from their appointed statutory auditor
3.	Proof of Bidder (Prime Bidder in case of a consortium) having a minimum annual turnover of Rs. 100 Crores in each year during the last 2 financial years (2006-07, 2007-08) from IT/ITES related operations,	Duly certified statement from their appointed statutory auditor
4.	Proof of the bidder certification of ISO 9001:2000	Copy of certificate issued to bidder by respective agencies
Following proofs are required from the Bidder (in case of consortium: Prime Bidder or respective member(s) whoever is responsible for Multi-modal Biometric based Identity Solution)		
5.	Proof of provider of identity based solutions and services for last 5 years,	certificate of incorporation and Certificate of Commencement of Business issued by the Registrar of Companies/ Equivalent agency of respective country
6.	Proof of turnover of not less than Rs. 45 Crores or USD 10 million from Biometric Services in last financial year or as on 31-03-2008,	Duly certified statement from their appointed statutory auditor

7.	Should be legally allowed to implement and deploy the proposed multi-modal biometric identity solution(including underlying algorithms) for next 10 years evidenced by relevant documents	Relevant documents showing rights to deploy the proposed multi-modal biometric identity solution(including underlying algorithms) for next 10 years
8.	Proof of one present installation where solution is deployed on multi-modal biometric platform in 1:N matching way.	Customer certification which is to be notarized/certified as per norms applicable in the customers' respective countries

- ❖ The prime bidder shall be required to submit a draft of joint Memorandum of Understanding (MOU) between the consortium member(s) for the contract in response to this EOI.
- ❖ Any other Remarks

2. Technical Particulars to be provided by the Bidder

The vendor is expected to submit a tentative solution for the requirements mentioned in scope of work section. The response to EOI should mandatorily include

- ❖ Tentative
 - Solution Architecture
 - Hardware configuration required at POS as well as central system
 - Network requirement between POS & Central system depending on load
 - Security Architecture including Data Security and Transmission security
- ❖ Software details and implementation strategy taking business requirements, volume considerations, security considerations of PAN application including biometric details sustained performance,
- ❖ Details on fusion strategy, strategy to maintain scores of each matching algorithm and passing these scores to ITD in secured manner
- ❖ Details on matching strategy, Deployment of multi modal matching algorithm including integration with existing application
- ❖ Details on matching strategy for Biographical data of new PAN records and matching it from old PAN records database
- ❖ Strategy to handle PAN applicants in an effective manner at POS and mobile POS based on past project experience
- ❖ Details on management of quality of data capture, permissible FAR and FRR rate.
- ❖ Limitation of proposed solution and Strategy to handle these limitations
- ❖ Strategy on how to get NRIs submit their biometric information to DIT
- ❖ Strategy on how to enroll Small babies below 12 years
- ❖ Strategy on how to limit maximum one visit to POS for applicants
- ❖ strategy to handle cases of fraudulent intentions of the applicants
- ❖ Roadmap for each component of the proposed solution

- ❖ Specifications for proposed PAN Card
- ❖ Strategy to deliver and dispatch the PAN card along with handling of undelivered PAN card.
- ❖ Typical lead time to supply the equipment and calendar time period that would be required for installation and commissioning of the infrastructure.
- ❖ Confirmation to conduct a POC with “near-live” conditions as part of the tendering process and also indicate typical lead time for conducting POC at any technically equipped institution in India and typical calendar time period that would be required for POC exercise.
- ❖ Confirmation to conduct site visit of reference site(s) for ITD officials during POC.
- ❖ Confirmation to provide the IPR of customized software, if any, including the source code to ITD. This should be delivered in totality before the start of implementation. Confirmation to keep source code under escrow management , if required.

(The bidder is free to provide multiple solution options in order of preference. In case of multiple options, the bidder should provide all the above details of each option and advantages and disadvantages of one solution with respect to others)

- ❖ The Bidder (in case of consortium: Prime Bidder or member whoever is responsible for Multi-modal Biometric based Identity Solution) should provide the following particulars along with relevant supporting documentation
 - i. Largest biometric project executed (globally)
(Please give brief details of the number of registration done using biometric solution and type of biometric used (Finger Print, Facial etc.)
 - ii. Has the proposed solution been deployed and proven in several large scale projects across the world?
(If yes, please provide the following details
 - *Organization name and nature of business*
 - *The purpose of deployment of the solution supplied by you*
 - *Characteristics of the system including application functionality, architecture schematic and solution components*
 - *The current workload including number of users, number of transactions, peak loads.*
 - *Estimated future workload that the installed solution is capable of handling)*
 - iii. Have you implemented any Multi Modal Biometric Solution?
(Even if you have done the Proof of Concept (POC) or Pilot using Multi Modal Biometric Solution, you may include the same. Please mention the order of magnitude in terms of number of subjects covered. If scalability has been demonstrated using synthetic digests, please mention it clearly).
 - iv. Who are your present customers for biometric solutions?
(Give three references of the present customers of your biometric solution)
- ❖ Comments on ‘Scope of Work’ section and ‘Important Aspects of the Solution’ section

- ❖ Any other Remarks

3. Verification

- 1) We confirm that we will abide by all the terms and conditions contained in the Expression of Interest document.
- 2) All the details mentioned above are true and correct and if the Directorate of Income Tax (Systems) observes any misrepresentation of facts on any matter at any stage, Directorate of Income Tax (Systems) has the right to reject the proposal and disqualify us from the process.
- 3) We hereby acknowledge and unconditionally accept that Directorate of Income Tax (Systems) can at its absolute discretion apply whatever criteria it deems appropriate, not just limiting to those criteria set out in the Expression of interest and related documents, in short listing of vendors for providing solution.
- 4) We also acknowledge the information that this response of our Company for the Directorate of Income Tax (Systems) process of Expression of Interest is valid for a period of **six months**, for the short-listing purpose.,
- 5) We also confirm that we have noted the contents of the including various documents forming part of it and have ensured that there is no deviation in filing our offer in response to the tender. The Directorate of Income Tax (Systems) will have the option to disqualify us in case of any such deviations.
- 6) We understand that the bid security furnished by us may be forfeited:
 - (a) if we withdraw our participation from the EOI during the period of validity of EOI document; or
 - (b) in the case we do not participate in the subsequent Tender process after having been short listed;

Place:

Date:

Seal and Signature of the Bidder

Annexe B –Bid Security Form

Whereas ----- (hereinafter called 'the Bidder') has submitted its EOI dated ----- for implementation of Multimodal biometric solution for the Income Tax Department (ITD) (hereinafter called "the Bid") to Director of Income Tax (Systems).

KNOW ALL MEN by these presents that WE ----- of ----- having our registered office at ----- (hereinafter called "the Bank") are bound unto the Director of Income-tax (Systems) (hereinafter called "the Client") in the sum of ----- for which payment well and truly to be made to the said Client, the Bank binds itself, its successors and assigns by these presents. Sealed with the Common Seal of the said Bank this -----day of -----2008.

THE CONDITIONS of this obligation are:

- 1. If the Bidder, having been notified of the acceptance of its EOI by the Client during the period of validity of EOI
 - (a) Withdraws his participation from the EOI during the period of validity of EOI document; or
 - (b) Fails or refuses to participate in the subsequent Tender process after having been short listed in accordance of the EOI Document;

We undertake to pay to the Client up to the above amount upon receipt of its first written demand, without the Client having to substantiate its demand, provided that in its demand the Client will note that the amount claimed by it is due to it owing to the occurrence of one or both of the two conditions, specifying the occurred condition or conditions.

This guarantee will remain in force up to and including 60 days after the period of bid validity, and any demand in respect thereof should reach the Bank not later than the above date.

(Authorised Signatory of the Bank)