# Consultations, Documentation & Advocacy on e-Procurement in Nepal in general and in Government in particular

### Final Substantive Report

November 30, 2005

Submitted to

#### The Asia Foundation

Kathmandu, Nepal

Submitted by



#### **IT Professional Forum**

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#### 1. Review of Past Initiatives

The Asia Foundation Nepal having shared interest in creating and enabling environment for the development of Small and Medium Enterprises (SME) in Nepal have recognized the role of the IT Professional Forum and provided grant assistance. From past three years IT Professional Forum and The Asia Foundation (TAF) is working in partnership and had completed, documented and advocated government, private, public enterprises, civil society, business association, professional association, donor community, I/NGO and public at large on various areas by encouraging SMEs to use information and communication technology for their development.

The major stakeholders in this project are Ministry of Environment, Science and Technology (MOEST), High Level Commission for Information Technology (HLCIT), National Information Technology Centre (NITC), Office of the Financial Comptroller General (OFCG), Controller of Certification Authority (COCA), and IT Professional Forum (ITPF).

Our shared efforts had resulted in creating conducive environment and made successful achievements in the following areas:

- ❖ Advocacy and Awareness Our continuous campaign, follow-up, orientation, and tutoring on the use of information and communication technology in delivering government services to the citizens and business communities and buying goods and services for public consumption will promote SMEs and at the same time will help to improve productivity and service capability, optimum use of financial resources, strengthen people's faith and establish the norms of good governance. The inquisitiveness, participation and support by numbers of people from government, public enterprises, civil society, private, associations, Media and donor and I/NGO have encouraged both of us to further continue the project and bring to a conclusion where the government and public enterprises will conduct their actual purchase electronically (e-Procurement).
- ❖ Cyber Legislation His Majesty's Government through the royal proclamation had earlier brought the "Electronic Transaction Ordinance 2060", in the month of Bhadra 2061. The two regulations namely "Electronic Transaction Regulation 2061" and "IT Tribunal (Procedure) Regulation 2061" were also approved by the His Majesty's Government and was published in Nepal Gazette in its issue Baisakha 2062. With these legislations all transactions that are created, stored, transmitted and received electronically are recognized and legalized in Nepal. This is the first step towards modernization of the public and government offices and their procedure and moving ahead in the direction of e-Commerce and e-Government.
- ❖ IPR and VoIP The awareness on the Intellectual Property Right and Voice over Internet Protocol were building among planners, policy makers, bureaucrats, service providers, professionals, academia, and business entrepreneurs. The government had initiated various measures in respect of IPR but had kept pending the issues of VoIP in light of protecting national telecom company.
- ❖ Nepal's strength in ICT 'Nepal ICT 2003', a comprehensive scenario on the strength and capacity of Nepal in the field of information and communication was published in hardcopy and CD. The report also covered the views of expressed by the eminent planners, policy makers, ICT professionals, ISPs, business entrepreneurs, and chamber of commerce and assessed Nepal's ICT position.

This report was very instrumental for the government, private, Computer Association of Nepal, and ITPF in promoting Nepal as one of the ICT destination in the Asia.

- e-Procurement Series of awareness, discussion, interaction, workshop at different levels among government, private, professional, I/NGO were conducted on the use of ICT by the government and government organization in all purchases. A national level consensus was reached on utilizing information and communication technology in buying goods, services and works and delivering services to citizens and business by the government, public enterprises, autonomous institutions, projects and local government.
- ❖ Public Procurement Legislation We contributed our expert opinion on the upcoming Public Procurement Ordinance and Public Procurement Regulation which will be the governing legislation for all procurements of the government at all levels including government institutions. These legislations will replace the existing HMG's Financial Administration Regulation 2058. These legislations have accommodated the concept, principle and procedure for e-Procurement in the country. The legislations may encourage and encompass difficulties and barriers Users, Professionals, Intellectuals, Service Providers, Entrepreneurs, Small & Medium Enterprises, Communities etc. of using Information Communication Technology for the development, promotion and sale (through Internet) of product and services.
- e-Procurement Portal ITPF had successfully conducted in-depth study; lobbied strongly; conceptualized, designed, developed, implemented, hosted and operated a bilingual (English and Nepali) e-Procurement portal of Nepal named <a href="https://www.bolpatra.com.np">www.bolpatra.com.np</a>, a government and public procurement portal. The portal is live since last 9 months and has attracted private business enterprises to register their companies for conducting and receiving services from the portal.
- ❖ Information Dissemination The Public Procurement Legislations are still in a process of promulgation, the government organizations are not in apposition to register their institutions in the portal and are not actively utilizing the portal. However, ITPF is uploading the purchase information published in the government and private newspaper on the portal everyday and the same is automatically mailed to the registered (in the portal) private companies. This service is very much helpful to the registered companies and the portal have able to create good atmosphere of trust and confidence.
- Hands-on-Training A successions of training and Hands-on-Training on the procurement portal and distribution of information regarding www.bolpatra.com.np had stimulated new initiatives on the part of trainees. The impact of our rigorous and innovative work to facilitate government and public enterprises to buy goods and services online has aroused a new avenue for both public and private sectors.
- ❖ Publication of Booklet In order to educate people at large from central to local government, student to civil society, private entrepreneurs to I/NGO two booklets namely 'Public Procurement Portal' and 'Digital Signature' were published, circularized and oriented. This has very significant result on the part of readers and they are familiar with the concept and procedure of using <a href="www.bolpatra.com.np">www.bolpatra.com.np</a> and fair understanding of the value of secured transaction and its method of securing.

Strengthening Public and Private - We have created general awareness with respect to e-payment, digital signature, secured transaction, authentication and implementation of the electronic legislations among the government and the private. In order to build the capacity of the government and the private in the areas of controller of certification, authentication, security measures and IT tribunal, a study visit to New Delhi and Hyderabad of India was organized. The representatives from government, public enterprise, private and NGO took part in the study tour. The tour was very informative and successful in building relationship with the counterpart organizations in India.

#### 2. Present Grant Agreement

In the course of our mutual endeavor, IT Professional Forum and The Asia Foundation signed a project document on January 19, 2005 on the Consultations, Documentation, & Advocacy on e-Procurement in Nepal in general and in Government in particular. The continuation of the assistance by The Asia Foundation is for the logical completion of the program initiated by both the partners a year before. The project was awarded for a period of 9 months starting from January to September 2005 and was further extended for a month. The total project grant assistance was Rs.17, 25, 500/=.

The grant contract had underlined to assume the following Terms of Reference:

- 2.1 Capacity building in HMG/N and business associations on electronic security measures, Controller of Certification Authority, and IT Tribunal
- 2.2 General awareness creation for e-procurement, electronic payment, digital signature, and authentification
- 2.3 Advocacy in government and support for forthcoming Public Procurement Legislation, including one observation visit to an appropriate Indian government facility
- 2.4 Improvement, demonstration, and promotion of the Public Procurement Portal <a href="www.bolpatra.com.np">www.bolpatra.com.np</a> where government, municipality, and public enterprise tenders and sealed quotations will be posted along with vendor product prices.
- 2.5 Handing over of procurement portal responsibilities to a government agency

#### 3. Project Achievements

The project was smoothly operated with the active participation and cooperation from all of the stakeholders. The project had achieved all that were listed in the TOR and had gained the trust and confidence of government, public, private, professional and I/NGO.

#### 3.1 Awareness creation

❖ The government and public procurement portal <u>www.bolpatra.com.np</u> was designed, developed, implemented, and is under live operation (sample web page in annex-2). ITPF also developed the training materials and used two introductory booklets namely, 'Public Procurement Portal' and 'Digital Signature' as the training document as well.

- ❖ The private business entrepreneurs were invited in many programs where eprocurement knowledge, use of portal for preparation of response to the government tender and submission were disseminated.
- ❖ Both the print and the electronic Medias were activated in dissemination of information on the importance of portal, way of using it, and value addition to their respective areas. This message has created positive impact on the supplier side. We received various enquiries from prospective suppliers by telephone and mail and many new suppliers registered in the portal.
- ❖ ITPF is putting the synopsis of tender information published by the different government agencies in government newspaper on daily basis and the same is automatically mailed to the suppliers registered in the portal (annex-7). This service has enriched clients and they are dependent on the portal services instead of buying and scanning through all ten daily newspapers they are getting ready information on the email.
- ❖ Orientation program on e-Procurement and the portal to the participants of 'Training on Procurement Practices, Contract Administration and Basic Training Skill' conducted by the Office of Financial Comptroller General was organized. Over 90 Under-Secretary and high level officials from different ministries and department of HMG, public enterprises, and projects participated in batches (sample of participants in annex-3).
- ❖ The OFCG and ITPF had come to an understanding where the later will participate in all of the training activities organized by the former and the participants will be trained on the use of <a href="www.bolpatra.com.np">www.bolpatra.com.np</a> portal. The course on Hands-on-Training is in annex-4
- ❖ Training on the portal was organized exclusively for around 50 officials of OFCG where Comptroller General, Joint-Comptroller Generals, Deputy-Comptroller Generals and other Officer level employees took part. At the end of program the Comptroller General put his remarks as the program was very functional, useful and valuable to the accountants.
- ❖ In order to further promote and convince public and private entities, ITPF has assembled (in CD) the opinions of planners, civil servants, chamber, business entrepreneurs, chartered accountants and legal counselors on the electronic government procurement <a href="www.bolpatra.com.np">www.bolpatra.com.np</a> its use, value addition and contribution to the citizen, government and private. The content will be telecast through television and the CD will be used as a promotional materials.

#### 3.2 Advocacy in government

- ❖ ITPF interacted with the Secretary Ministry of Environment, Science and Technology for the implementation of Electronic Transaction by getting the relevant regulation approved from the Council of Ministers and Creating Organizations to make the Electronic Transaction effective and operation as desired by the legislation.
- The meeting decided to submit a recommendation to the Council of Ministers for their consent for the first phase to declare the <a href="www.bolpatra.com.np">www.bolpatra.com.np</a> as government portal and send directives in this effect to all central and local governments, public enterprises and all concerned offices to use this portal for

- disseminating information on procurement. The meeting was represented by high level officials from the MOEST, HLCIT, NITC and ITPF (annex-5).
- ❖ Two days discussion program was organized by Office of Financial Comptroller General on the draft of Public Procurement Act and Regulation. ITPF participated on the program and submitted recommendations and advocated to incorporate electronic procurement procedure and practice in the upcoming Public Procurement Act and Regulation. All the participants were also given Hands-on-Training on the occasion.
- ❖ ITPF in a separate interaction with the Comptroller General advocated the immediate need of Public Procurement Legislation. The Comptroller General conveyed that the committee had already submitted the final draft with recommendations to the Ministry of Finance who will in course of time put the matter in the Council of Ministers for the approval. It is expected that the legislation will come out within the two months.

#### 3.3 Capacity Building in HMG/N and Business Associations

- ❖ The Ministry of Environment, Science and Technology has been taking leadership in establishing the required organizations as envisaged in the Electronic Transaction Ordinance in conjunction with other line ministries, public enterprises, private business houses, NGOs and ITPF.
- ❖ A fruitful interaction was convened participated by the representatives from the Ministry of Environment, Science and Technology, Ministry of Law and Justice, Office of Attorney General and National Information Technology Centre for setting up of institutions like Controller of Certification Authority, IT Tribunal, and Certification Authority in the country to secure, promote, manage and regulate the Electronic Transaction. As the country lacks experience in this field, the meeting sought to explore the possible information from neighboring country and invite the expert for further dialogue.
- ❖ The ITPF supported the initiative taken by the MOEST in appointing chief of Controller of Certification Authority who should look after the issuance of license to Certification Authority (government and private), ensure the proper generation of digital signature and promote the use of e-Governance, e-Procurement and e-Commerce. A selection committee was formed where ITPF is a member.
- Under the leadership of the Under-secretary of the MOEST a six members team including government, public enterprises, private and ITPF headed to New Delhi and Hyderabad, India to study various governments' and private organizations' activities such as organization structure, qualification of manpower, authorities and responsibilities, digital signature infrastructure, technology, security mechanism, operation and management of Controller of Certification Authority, Certification Authority and Electronic Government Procurement system.
- ❖ The team briefed the progress of India visit to the Secretary, Ministry of Environment, Science and Technology, Vice-chairman High Level Commission for Information Technology and Comptroller General Office of Comptroller General. The team also appraised the progress to the First Secretary Indian Embassy Kathmandu.
- ❖ The India Visit was very successful in terms of capacity building, understanding the need for digital signature & authentication, education on the basic

infrastructure, technology, human resource and security in establishing Controller of Certification Authority and Certification Authority and developing relation with the respective government and private organization. A formal report was submitted to the His Majesty's Government Ministry of Environment, Science and Technology, High Level Commission for Information Technology and Office of Comptroller General (annex-1).

#### 3.4 Improvement, demonstration, and promotion of the www.bolpatra.com.np

The need for electronic government procurement was reassessed by obtaining the feedback from the purchase officers, legal experts, accountants and the private enterprises. Presentations were made for different government officials and got feedback in different aspects of the product operation and others. Based on the suggestion and the Financial Administration Regulations 2058 of Nepal the portal was improved in the following areas:

- Direct purchasing (shopping) feature is added and enhanced for email alerts.
- Auction module is added with real-time regular bidding and proxy bidding.
- Reverse auction module is added for competitive bidding and negotiation bidding on service and product purchase.
- ❖ Localization in Nepali language completed and portal is now available for both English and Nepali readers (annex-2).

#### 3.5 Handing over of Public Procurement Portal

- ❖ The e-Procurement portal <u>www.bolpatra.com.np</u> is successfully operated and managed by the ITPF. This portal can be used by HMG Offices, Corporations, Projects, Local Governments and other government owned offices. One of the activities under the grant agreement is to hand-over the hosting, operation, implementation, management and support of the portal to government agency.
- ❖ From the very beginning of portal development, ITPF had clearly expressed with the government agency that the portal is made for and on behalf of the government and will be hand over to its designated agency for further operation and management. ITPF received a positive response in this regard. As a follow up of our commitments ITPF conducted series of orientation, workshop and interaction programs with were policy makers of Ministry of Environment, Science and Technology, National Planning Commission, Office of Comptroller General, High Level Commission for Information Technology, National Information Technology Centre, Computer Association of Nepal, and Nepal Chamber of Commerce (annex 6).
- Despite of our thorough hard work the government agencies do not seem to be prepared for taking over the portal operation, implementation and management by themselves. ITPF was successful in building trust and confidence of the government agencies and private entrepreneurs over the <a href="www.bolpatra.com.np">www.bolpatra.com.np</a> and electronic transaction, but they hesitate to operate and manage portal by citing following reasons:
  - Public Procurement Legislations are still in the process of promulgation
  - Controller of Certification Authority and Certification Authority are not established for authentication and verification of users and documents

- Issue and use of Digital Signature have not begun for security of transmitting document electronically
- Required infrastructure hardware, network, software, human resource are not in place at public sector
- ❖ Finally, ITPF assured her commitment to support the government endeavor in capacity building as well as hosting, operation and maintenance of the <a href="https://www.bolpatra.com.np">www.bolpatra.com.np</a> portal until such time the government is not capable to fully takeover.

#### 4. Conclusion

The Asia Foundation present grant assistance to the IT Professional Forum for the Consultations, Documentation & Advocacy on e-Procurement in Nepal in general and in the Government in particular has come to an end, however few activities remain still and we hope to complete them in coming days so that the benefits of e-Procurement (right-to-information, transparency, accountability, participation, economic purchase, database and productive management) will drive the His Majesty's Government towards good governance. We are confident that the targets set by the grant contract were achieved except handing-over the portal to the government.

Today, the agencies in the His Majesty's Government are lacking in terms of finance, human resource, legislation, infrastructure, network, security measures, and decision to adopt electronic transaction system in the government agencies' purchases have not been taken place. The line agencies (MOEST, HLCIT, OFCG, and NITC) are looking forward for early promulgation of the Public Procurement Act which has basically slow down the implementation process of e-Procurement in the country than other constraints.

The grant assistance is successful in building awareness of electronic transaction among government, public and private sectors. The private is prepared to go along with the e-Procurement however the government and public sectors are still preparing themselves in this concern. Some of the government departments and offices including local governments are initiated various on-line applications available to the people and businesses. The Ministry of Environment, Science and Technology is arranging to setup the office for the Controller of Certification Authority who will issue license to Certification Authority and will manage digital signature aspect.

We would like to continue our support in the implementation, operation, management and maintenance of the portal (<a href="www.bolpatra.com.np">www.bolpatra.com.np</a>) developed for all the government and public procurements in future as well. If we do not continue to support the portal all our effort to build capacity at government and private, train human resource and handover the e-Procurement system to the government agency will be futile. Therefore, we sincerely recommend (details are presented in annex-1 under Suggestions for Future Initiatives) to the Asia Foundation to prolong the financial support to the project in future on the following activities:

- Awareness creation, orientation, hands-on-training to the government agencies and private.
- Capacity building of the government in the areas of security on electronic transaction, establishment of organization to support digital signature verification and e-Payment.
- Enhancing, updating and modifying www.bolpatra.com.np as per the upcoming Public Procurement Legislations and user' feedback.

- Support and assist government agencies in bringing the Public Procurement Act at earliest possible.
- Publication of document to disseminate information to large community.

IT Professional Forum would further like to tie-up the partnership with the Asia Foundation in driving Nepalese Government towards the e-Government systems and converting manual process of service delivering to service buying applications electronically.

#### **Annex**

Number	Description	
1	Report on Capacity Building for Controller of Certification	
	Authority of Nepal	
2	Snapshot (Nepali and English) of www.bolpatra.com.np	
3	Sample Participants List on Hands-on-Training	
4	Course outline for Hands-on-Training	
5	Participant list on hand-over Discussion Process	
6	Hand-over Discussion Paper	
7	Sample Email to Private Organization	
8	Notice and CD Information	

# Report on Capacity Building for Controller of Certification Authority of Nepal

August 2005

Submitted to

His Majesty's Government
Ministry of Environment, Science & Technology
High Level Commission for Information Technology
Office of Financial Controller General

Presented by



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#### 1. Background

Nepal is marching ahead in the application of information and communication technology in the areas of e-Governance, e-Procurement, e-Commerce, e-Learning, e-Health etc which will result in building awareness, generating more employment, improving the service delivery to citizens, business development, and economic growth. The enactment of Electronic Transaction Ordinance 2060, Electronic Transaction Regulations 2061 and Information Technology Tribunal Regulation 2061 are fundamental legislations for establishment, promotion and regulation of e-Transaction in the public sector for delivering services to the citizens, conducting purchases and in private sector for doing business.

To site some of the notable online activities in operation in Nepal from last four to five years are: e-Commerce businesses within and outside country and the number of e-Transaction and e-Volume are increasing everyday; Few local authority such as Bharatpur Municipality allows citizens to download service delivery forms and accepts them online; Cottage and Small Industry Kathmandu District Office has announced and is accepting online registration and renewal of all types of industry; e-Governance program of His Majesty's Government has allowed the general people to download the required form(s) e.g. citizenship, passport, personal information and so on; most of the government ministries, departments, public enterprises, commissions etc. have published their activities, personal bio-data of high level officials, programs, forms, information on their respective websites and some of the institutions are allowing to download the purchase forms as well. In this regard IT Professional Forum has designed, developed, tested and operated e-Procurement portal (<a href="https://www.bolpatra.com.np">www.bolpatra.com.np</a>) for conducting all government and public purchases online.

The legislations have conceived to establish institutions for developing and promoting the use of digital signature in all e-Transactions because of security and privacy reasons. So far our online applications within the country are not secured which may contravene with the privacy policy and against our regulations. We need strong organization(s) which should support, develop, promote and regulate the digital signature certificate, authenticate the sender and receiver and build trust in e-Transaction. The country is lacking in contemporary technology, required infrastructures, logistics and qualified human resource having relevant knowledge, experience, exposure and tools for setting up of such institutions which can carry out all the activities under the legislations.

Therefore a field visit of the establishments of the neighboring country India was organized. A team comprising of six members was guided under the leadership of the Ministry of Environment, Science and Technology visited, studied, discussed and developed relationship with the counterpart institutions in India from July 17 - 22, 2005.

#### 2. Target Objectives

- 2.1 Capacity Building of His Majesty's Government of Nepal and Private Sector in the areas of Information and Communication Technology: e-Government, e-Procurement, e-Commerce, Controller of Certification of Authority, Digital Signature, Public Key Infrastructure, Certification Authority etc.
- 2.2 On-site observation, interaction and getting acquaint with the first hand knowledge on the physical infrastructure, technology deployed, logical facilities, security measures, human resource, financing, operation,

- implementation and support of initiatives taken by the Government of India and the Private Sector in above areas.
- 2.3 Interaction, Sharing the experiences and learn the best practices adopted by the various Indian Public and Private Organizations in the areas of study.
- 2.4 Further to explore and identify the areas of cooperation between Nepal and India in future

#### 3. Institution visited and studied

#### New Delhi

- Controller of Certification Authority (CCA), Ministry of Communication & Information Technology, Department of Information Technology
- National Informatics Centre (NIC), Ministry of Communication & Information Technology - Certification Authority
- Mahanagar Telephone Nigam Limited (MTNL), Certification Authority

#### Hyderabad

- National Institute for Smart Government (NISG) for e-Procurement
- Institute for Development & Research in Banking Technology (IDRBT) for Banking sector Certification Authority
- Tata Consultancy Services (TCS) for Certification Authority

#### 4. Expected Outcome

- 4.1 In general, the visit meets the expectation of the team members. It was very informative, educative, eye-opening and incredible for the team.
- 4.2 This visit is first of its nature in the areas of study and was fruitful and productive and able to develop relationship with the Indian counterpart organizations.
- 4.3 The team felt that such type of visits and interactions between the representatives of the two Governments and the Private sectors will be continued in future.

#### 5. Lesson Learnt

#### 5.1 Controller of Certification Authority

The role of Controller of Certification Authority is to (a) Authentication of entities in cyberspace (b) Prevention of deliberate or accidental Disclosure and Amendment or/and Deletion of data (c) Licensing of Certification Authorities and establishment of Public Key Infrastructure for secure e-Governance and e-Commerce applications in the country (d) National repository of digital signature certificates issued by Controller or/and Certification Authorities within the country.

The confidentiality (ensuring that information is read only by the intended recipient) and integrity (ensuring that no one has intercepted information and changed it in any way) of the electronically transaction, authenticity (process of satisfying oneself that someone is who they say they are) of the sender and non-repudiation (ensuring that the transaction is legally binding) by the sender of the document are the major issues related with the digitally signed document which should be strictly comply by the Controller as per the Electronic Transaction Legislation(s) of the respective country.

When the Controller deploys Public Key Cryptosystem for generating public and private keys for digital signature, the issues such as (a) How will recipients get senders public key? (b) How will recipients authenticate senders' public key? (c) How will senders be prevented from repudiating his/her public key? (d) How will subscribers of the certificates issued by a Certification Authority be assured of authenticity of license is to be resolved beforehand. At each stage from appointment to closure of a Certification Authority the Controller shall have to resolve issues and challenges raised by the subscribers.

The Controller shall have to create trust and confidentiality among all subscribers and Certification Authority(s) by maintaining adequate security measure such as (a) reinforced walls for room housing digital signature certificates (b) 24-hour and 365 days surveillance through CCTV and DVR (c) access controls through proximity cards and biometric readers, etc (d) physical security including locks (e) security personnel and so on.

#### 5.2 Certification Authority

The Certification Authority is an organization licensed by the Controller of Certification Authority to issue under the Electronic Transaction Legislation(s) public key certificates to individuals, corporate houses, government institutions, academies, business enterprises etc who want to submit or/and receive document electronically.

The Certification Authority must be widely known, financially strong and trusted organization(s), must have well defined methods of assuring the identity of the parties to whom it issues certificates, must confirm the attribution of a public key to an identified physical person by means of a public key certificate and always maintains online access to the public key certificates issued. The Certification Authority may be setup separately by government agency and private enterprises and they should be

In order to be a trusted Certification Authority the organization shall also have to maintain similar kind of security measures for storing the digital signature certificates issued by them, providing uninterruptible services to the subscribers, adopt cryptographic technologies, comply with processes & systems, legal frameworks and standards as laid down in the legislation(s) and directives of Controller of Certification Authority.

#### 5.3 Digital Signature, Public Key Infrastructure, Authentication and Control

Electronic document produced by a computer, stored in digital form are very easily copied, distributed, retrieved and archived. Therefore the digital document is perfect for e-Governance and e-Commerce applications. But at the same time (a) the electronic document can be deleted, modified and rewritten without leaving a mark, (b) integrity of an electronic document is "genetically" impossible to verify (c) a copy is indistinguishable from the original and (d) it cannot be sealed in the traditional way, where the author affixes his/her signature.

There are still some issues like (a) anyone can generate their own public and private key pairs (b) anyone can attach any name to a public key (c) anyone can post a public key in the public directory. Some trusted third party(s) is required which certifies the association of an individual with the key pair. They authenticate & bind users to public keys, issue certificate to authenticated individuals or organizations, revoke certificates and maintain actual status.

#### 5.4 e-Procurement and Procurement Legislation(s)

The mission of Government-to-Business is to create a business-friendly environment in the country by providing efficient, convenient, transparent and integrated electronic services to citizens, investors, industries and businesses in the areas of information on forms and procedures, approvals, clearances and permissions, reporting, filing, payments and compliances throughout the life-cycle. The following are the set of objectives of electronic procurement of Government of India.

- To reduce the time for processing procurement decision and processes
- To provide simplified forms, procedures and information in a convenient and cost–effective manner
- To enable event-based, online G2B interactions and transactions
- To enhance transparency, speed, certainty & responsiveness
- To automate workflow in the regulatory ministries/departments
- To reduce the burden of compliance by reducing the number of registers and returns

The e-Procurement was in operation in the state of Andhra Pradesh and is most successful in the areas of Construction and Works. The model is based on Public-Private Partnership. The Government of India has not enacted any special procurement legislation. The existing financial regulation and the directives of the Chief Minister are valid legal document for conducting electronic procurement at government ministries, departments and local bodies. Now, they are replicating the project to other five states within 2005.

#### 6. Present Scenario

The Ministry of Environment, Science and Technology is in the process of appointing a Controller of Certification Authority for Nepal (CCAN) as envisaged in the legislations. The CCAN will work under the jurisdictions of Electronic Transaction Ordinance 2060 and its regulation. This is the beginning point for the new organization. In order to achieve the desired result, promote and regulate e-Transactions within the country a numbers of activities such as infrastructure development, capacity building, awareness creation, institution promotion, human resource development, physical and logical facilities creation etc. have to set up simultaneously.

The team appraised the progress of India visit to the Secretary, Ministry of Environment, Science and Technology and Vice-chairman, High Level Commission for Information Technology and requested to take further steps to set up the appropriate CCAN facilities in Nepal or the government can use the facilities of CCA of India until such time Nepal will not develop her own. The team appealed to initiate the proposal for cooperation on ICT with India through appropriate diplomatic channel.

The team also informed the progress of India visit to Mr. Rakesh Kumar, First secretary & Head of Chancery, Indian Embassy in Nepal. He reiterated and advised the Team to forward request for further cooperation through diplomatic channel.

#### 7. Proposal for Strengthening CCAN

Based on the exposures the team recently had, we propose the following steps to be undertaken for strengthening the institutions and promoting the digital signature usage for secured e-Transaction.

- 7.1 Provide appropriate training and onsite exposure to CCAN
- 7.2 Creating efficient organization structure
- 7.3 Selecting qualified technical and non-technical staffs and organizing relevant training and exposure
- 7.4 Grant reasonably sufficient budget for human resource, administrative expenses, logistic support, office equipment and tools physical facilities, training, and others.
- 7.5 Create a fully secured office with required contemporary, technology, infrastructure, physical facilities, security, access control, logistic supports for CCAN where all the digital signature certificates will be stored.
- 7.6 Build trust of electronic transaction among public and private sectors by disseminating correct information, selecting reputed or trustworthy Certification Authority (CA), and building synergy among the stakeholders
- 7.7 Educate and promote private sector to establish Certification Authority(s) for issuing digital certificate and keys to non-government sector for conducting e-Transaction.
- 7.8 Advocate, organize and demonstrate the use of digital signature for conducting secured online transaction to public, private and general people.
- 7.9 Support government in framing strategic policy, guidelines, directives and regulations for disseminating all services online to the people as well as accepting of document and payment of tax online.
- 7.10 Support Certification Authority in their endeavor to aware and educate private individuals, corporate houses, associations and other in joining the e-Environment.

#### 8. Major Challenges

#### 8.1 Creating Trust in Electronic Transaction

Electronic document produced by a computer, stored in digital form is very easy to copy, distribute, retrieve and archive and ideal for e-commerce and e-governance activities. But, it can be deleted, modified and rewritten without leaving a mark; integrity of an electronic document is "genetically" impossible to verify; a copy is indistinguishable from the original and it can't be sealed in the traditional way, where the author affixes his signature.

The CCAN and CA(s) should build awareness, educate both public and private sectors, and demonstrate the secured way of conducting transaction electronically. This process is not easy and can not be achieved in short period.

#### 8.2 Identification, Authenticity and Integrity of e-Transaction & its repository

It is very difficult to convince people that someone is who they say they are and ensuring that information is read only by the intended recipient an no body in between is able to read, change and delete the document.

#### 8.3 Financial Investment

The government needs large amount of money for setting up of the foolproof (physical facility, technology, infrastructure, fireproof, security, privacy, access control, disaster recovery facility etc) CCAN and has to budget sufficient amount of money for operation, training, maintenance, support, up gradation of technology and infrastructure. Similar investment is needed for establishing CA.

The kind of investment required for the establishment, operation and support of CCAN or/and CA can not be justified in term of return within the span of 3 to 5 years.

#### 8.4 Human Resource

The concept of Controller of Certificate Authority, duties, power, obligations and the role in future are new and it is difficult to identify the exact qualification and experience of the new incumbents. The human resource should not only possess required qualification, exposure and experience but they must have high morale, integrity, confidentiality and capability to de3cide in abnormal situations.

#### 9. Suggestions for future initiative

The significance of digital signature in e-Governance, e-Procurement, e-Commerce and conducting transaction electronically is very vital. The country should be ready to establish institutions who issues digital signature certificates and key pairs to government, private and individual citizens for receiving and sending valuable document, delivering services, purchasing goods, works and services and making all kinds of payment whether tax or commercial nature. The acceptance of digital signature issued by Nepali Certification Authority and foreign Certification Authority is reciprocal. If we accept their certificate then they will also accept in return under e-Commerce.

The country also requires a controller who is responsible for issuing license, promoting and regulating certifying institutions; build trust on electronic transaction and a central site of database for all the digital signature certificates issued in Nepal.

- 9.1 Nepal should build her own infrastructure, building space, physical facilities, and logistics; deploy contemporary technology, foolproof system, and stringent access control; qualified & trained human resource; operate, manage and support Controller of Certification Authority office. This office should have all the features, facilities, contingency plans, recovery programs including disaster management in par with international standard.
- 9.2 Simultaneously, the CCAN should encourage government and private sector to set-up Certification Authorities to issue desired digital signature certificates for their respective customers.
- 9.3 The investment in establishing of Certification Authority is approximately similar to CCAN in terms of infrastructure, technology, physical facilities, system, recovery, access and so on.
- 9.4 A large amount of investment has to layoff in order to build the CCAN and CA(s) in the country. The resources at the hand of public and private are very scares in the country. Unless there is profit in the venture, the private sector will not take a risk. The return in comparison to the kind of investment they have to make for establishing CA(s) would not be feasible within the period of 3 to 5.
- 9.5 The Controller of Certification Authority of India assured the team that many areas of cooperation can be possible which can be further promoting the benefits to the people and government of two countries. They would like to share their experience and support in the following areas provided a proper government level arrangement is settled.
  - Consultancy
  - Technical Support
  - Training

- Financial Support
- Others
- 9.6 In absence of the required financial resources to set-up CCAN, the government can look for developing partner countries or donor agencies. Alternatively the government can utilise the 'Program of Cooperation' accord signed between Nepal and India in this subject.
- 9.7 If the government unable to get needed funds from other sources, it can negotiate with government of India for using their CCA's facilities for Nepal's CCAN requirement for sometime. Nepal will utilise India's facilities initially, encourage Nepali to use digital signature and build trust, and once the transactions are justifiable and fund will be arranged the CCAN will be established.
- 9.8 The similar arrangements may be made by the private sector for utilising the facilities of Indian CA(s) in issuing and managing digital signature and building trust among the customers in Nepal. After a handful of customer base, the private sector may build own CA(s) in the country.

#### 10. Delegation

A delegation comprising of six members representing government, non-government organization and private sector are given below.

- 1. Mr Purushottam Ghimire, Under-Secretary and Spokesperson, Ministry of Environment, Science & Technology
- Mr. Sitaram Timsina, Under-Secretary, Ministry of Environment, Science & Technology
- 3. Mr. Shakti Prasad Shrestha, Deputy-Controller, Office of Financial Controller General
- 4. Mr. Mahesh Singh Kathayat, Executive Director, National Information Technology Centre
- 5. Mr. Rajesh Kumar Shakya, CEO, Hitechvalley iNet Pvt Ltd.
- 6. Mr. Pushkar Prasad Wagley, Project Manager, IT Professional Forum

The India Visit was financed by the IT Professional Forum under the technical cooperation of The Asia Foundation Nepal.









#### Sample Presentation of Participants in Hands-on-Training on www.bolpatra.com.np

Date: January 27, 2005 (Magh 14, 2062) Venue: Nepal Administrative Staff Collage

S.	Name of Participants	Organization Name
N.		
1	Dipak Man Singh Shrestha	Ministry of Physical Planning
2	Hari Pd. Rijal	Department of water Supply
3	Dwarika Acharya	Mahalekha Niyantrak Karyalaya
4	Ramesh Bd. Shrestha	Administrative Staff Collage
5	Kamal Pradhan	Administrative Staff Collage
6	Lab Raj Shrestha	Kosh Nirdesnalay, Kathmandu
7	Prakash Raj Pandey	Kosh Nirdesnalay, Pokhara
8	Jayadev Shrestha	Kosh Nirdesnalay, Chitwan
9	Suresh Pradhan	Melamchi Khanepani Bikas
10	Pradip Raj Pandey	Department of Irrigation
11	Dinkar Sharma	Department of Road
12	Satya Narayan Prashad	Department of Irrigation
13	Ramesh Kumar Sharma	Mahalekha Niyantrak Karyalaya
14	Damodar Lamichhane	Nepal Rastra Bank
15	Shanti Prashad Shrestha	Mahalekha Niyantrak Karyalaya

#### Course on Hands-on-Training on

#### www.bolpatra.com.np

Electronic Procurement is commonly known as e-Procurement and is a part of the Information and Communications technology revolution that profoundly transforming the way businesses and people conduct their day-to-day activities. Amongst the many tools being developed for good governance, lately there has been much focus on e-procurement — using Information and communication Technology to open up government processes and enable greater public access to information.

Training course is aimed at Government agencies and business organizations, who want to participate in e-procurement process in national e-procurement portal or international marketplace portals. It provides an in-depth knowledge about e-procurement, global trends, eye opening on international procurement portals and focus on hands-on training on the use of <a href="https://www.bolpatra.com.np">www.bolpatra.com.np</a> – the first e-procurement portal of Nepal.

	Topics	
1	■ The basics and necessary detail of the Internet based business – e-Business	
	Global e-business Trends	
	International e-procurement Marketplaces	
	e-Procurement in Nepalese Perspective	
2	e-Business and different e-business Models	
3	e-Procurement - benefit and challenges.	
4	Introduction to www.bolpatra.com.np	
	Feature overview of www.bolpatra.com.np	
5	How to post tenders in www.bolpatra.com.np?	
	Administration of tenders in www.bolpatra.com.np	
6	How to bid in www.bolpatra.com.np?	
	■ Bid administration in www.bolpatra.com.np	
7	Auction posting and bidding	
8	■ Direct purchase and product/services posting	
9	Other facilities in www.bolpatra.com.np - Awarded contracts, advertisements, Information center	
10	International e-Procurement portals	

# Participants in Handing-over of <a href="www.bolpatra.com.np">www.bolpatra.com.np</a> to His Majesty's Government

Date: June 27, 2005 (Ashadh 14, 2062) Venue: NITC, Meeting Hall

S.	Name of Participants	Organization Name
N.		
1	Sanjaya Kumar Upadhyay	NEA
2	Indiwar Badal	I.S.P. Association Nepal
3	Diwakar Pd. Rimal	Office of the Comptroller General
4	Narayan Kumar Shrestha	Department of Survey
5	Damodar Regmi, Director	Nijamati Kitabkhana
6	GP Adhikari	NID
7	Mahesh Singh Kathayat	NITC
8	Suresh Kumar Regmi	ITPF/PCS
9	Shiv Ranjan Paudel	Ministry of Health
10	Krishna Raj B.C. Director	Department of Information
11	Pradip Koirala	National Planning Commission
12	Babu Ram Gautam	Office of the Auditor General
13	Gaurab Giri	Ministry of Information & Comm
14	Shrijana K.C.	CAN
15	Bimal Shah	NITC
16	Arjun Kumar Thapa	MOEST
17	Deepak Pudasainy	NITC
18	Prerana Thapa	NITC
19	Akhil Mathema	OSS/CAN
20	Insp. Ravi Shrestha	Armed Police Force

# Handing-over of <a href="www.bolpatra.com.np">www.bolpatra.com.np</a> Discussion Paper

#### **Brief**

IT Professional Forum has successfully conducted in depth study; conduct careful advocacy; designed and developed <a href="www.bolpatra.com.np">www.bolpatra.com.np</a> a government and public procurement portal; organized awareness & demonstration of functionality of the portal; distributed information in the form of booklets. The impact of our rigorous and innovative work to facilitate government, public enterprises, projects from central to local government to buy or/and auction goods and services online has aroused a new avenue for both public and private sectors. The inquisitiveness, participation and support by numbers of people from government, public, Media, academia, professional and private have encouraged us to further continue the project and bring to a conclusion where the government and public enterprises will conduct their actual purchase electronically i.e. e-Procurement.

#### **Challenges & Opportunities**

There are many challenges before the government and the private in implementing and executing electronic procurement in Nepal. At the same time the implementation will bring a lot more opportunities – new businesses prospect, new markets, increase in self employment & possibilities generating new employments, saving in cost & time, better service delivery to citizens, improved buyer-seller relationship, capacity building, creation of national database, and competitiveness.

The country has to manage following challenges in order to successfully implement, operate and support e-Procurement from centre to village level in all kinds of purchases and auctions.

#### Legislation

- The "Electronic Transaction Ordinance 2061 B.S." and two regulations "Information Technology Certification" and "Information Technology Tribunal" 2062 B. S. are promulgated. The government has not been able to established institutions as envisaged in the legislation and their successful execution is yet to come.
- Until the Public Procurement Laws (draft version) are not promulgated and implemented, the government purchases must follow the existing Financial Administrative Regulation for their entire purchase activities.

#### Organization

- The country should setup strong organizations as envisaged by legislations needed to executive electronic transaction in the country with clear vision, objectives, functionalities, authorities and accountabilities as well as required financial and human resources.
- In order to encourage the use of electronic transaction by the government, citizens and the private enterprises, a strong public-private partnership model should be developed and put into practice.
- The government should also decide and assign the authorities, responsibilities and budget to two of the government offices - one to act as manager for operation monitoring of transactions and another to act as

- service provider for maintenance and support of government and public procurement portal. These institutions should also look towards bringing awareness, capacity building of other government and public offices, managing government tenders, maintaining central database and performing portal administration.
- The successful operation of e-Procurement will depend upon the number of users both buyers and sellers and their online transactions. A regular orientation and training program should be carried out to buyers and sellers on hardware, software, application, digital signature, tendering process etc.
- The government should identify one or two institutions or some institutions should come in front voluntarily to start implementing e-Procurement as a pilot project. Once they become successful, it should be replicated to other institutions, locations and levels.

#### **Financial**

- The government itself is in the need of more money in bringing peace, solidarity, managing conflict and conducting election in the country, it is very difficult to provide financial resources for this venture from exchequer's fund.
- The government should look into other sources of funding as the true implementation of e-Procurement will reduce cost, bring transparency, provide equal opportunity to SMEs, disseminate information to larger community and improve service competency. Nepal's development partners and donors do not see or do not prioritize ICT as one of the major areas of their cooperation. If they do, the financing would not be a problem.

#### **Behavior & Outlook**

• The government and public enterprises officials at all levels should be trained and educated in this application. They should be encourage to use the contemporary technology available for official purposes – sending circulars or notices or sharing and exchanging documents among ministries/departments/offices. They refuse to do on the ground that the offices do not have i) reliable technology ii) regulation to govern iii) qualified employee, and iv) privacy and confidential transmission.

#### **Trust & Confidence**

- ▶ In Nepal, public generally do not carry a positive image of the civil servants and private business houses when the matter comes to the procurement of commodities & services, hiring of consultants, and delivery of public services. They blame them of using illicit connection, favoring nearest or dearest, lenient to big houses, discrimination to new entrant or use of different kinds of jargon and muscle to gain new deal. The whole system is non-transparent.
- ▶ The relationship between buyers and sellers is not harmonious even then, they have to conduct business. Similar attitude is prevailing within the sellers, each looser businessman believes that his competitor got an opportunity because he has good relation with the buyer or has influenced the buyer or kickback the buyer to acquire new deal while the winner does not care. The competition is not fair and is far away from good business attitude.
- ▶ This preoccupied perception of buyers and sellers has forced them to doubt on the submission of tender document electronically whether the privacy of the quoted rate and document, confidentiality of information, non-disclosure and any time access of document before due date will be guaranteed by information and communication technology or will they be jeopardized in the name of e-Procurement?. Whether the e-Procurement eliminates or further encourages the drawbacks prevailing today from planning to the evaluation of a bid?

► The unauthorized access to computer database, damaging, hacking, computer virus, embezzlement and similar notorious activities happening online have also created uncomfortable opinions among users (buyers as well as sellers) about ICT and their applications.

#### 2.6 Authentication

- ▶ In order to conduct business through portal each buyer and seller has to register in the portal. Online registration process is easy and quicker but at the same time it is very difficult to identify the existence of the registered buyer or seller. Who should certify and authenticate the survival of buyer or seller?
- ▶ Another biggest problem is to guarantee the standard of goods and services delivery by the supplier. Because the similar categories of commodities are supplied by many suppliers and how to believe that the supplies of particular supplier(s) are genuine? Who should be given the responsibility of certification of commodities?

#### **Types of Users**

- Site visitor
- Government or Public agency/Buyer
- Supplier/Provider/Seller
- Portal Administrator

#### **Security Levels**

- User Level Registration/login
- Transaction Level SSL encryption
- Database Level Encryption in storage

#### **Technology**

- Open Source
- Programming: PHP
- Database: mySQL
- Modular
- Dynamic Database driven powered with powerful Administrative Control Panel
- Both in Nepali and English

#### **Stakeholders**

- National Information Technology Centre (NITC) as e-Procurement portal Host
- Office of the Financial Comptroller General (OFCG) as Procurement Portal Manager
- IT Professional Forum (ITPF) as Technology Partner

#### **Role of NITC**

- <u>www.bolpatra.com.np</u> hosting, updating & supporting
- Provide assurance to Government agencies and sellers/providers of the integrity of application, privacy of providers, confidentiality of tendering process
- Awareness and training programs for government agencies and providers/sellers

#### Role of OFCG

- Procurement Portal adaptation in all levels of government agencies
- Administration of <u>www.bolpatra.com.np</u>

- Verify the authenticity of Government agencies and Sellers/Providers
- Orientation & Training on use of Portal
- Monitor tendering process
- Help entering tenders and its electronic evaluation

#### **Role of ITPF**

- Technology transfer
- Technology trainings
- Portal enhancement & Support

#### **Challenges after Handover**

- Bringing-in Government agencies as Buyers
- Marketing of the Portal to Providers/Sellers
- Training on www.bolpatra.com.np and its mandatory use when purchasing products & services
- Regular enhancement of Portal
- Tender Document Purchase & Submission, Security Bond & Performance Bond payment
- Online Payment
- Privacy, Confidentiality, Security of transaction
- National and international bidding limitations

## Sample email message generated and send by the system to the respective Suppliers

---- Original Message ---From: IT Professional Forum

Sent: Friday, November 25, 2005 2:01 PM

Subject: Tender Notice

#### Dear Provider / Supplier

The advertisements of your interested area are uploading on "Central Sources of Public Procurement Portal". Please visit <a href="www.bolpatra.com.np">www.bolpatra.com.np</a> and click on the <a href="Advertisement">Advertisement</a> button on left side of the screen to get the more information of advertisements.

Thanking you

#### www.bolpatra.com.np

IT Professional Forum Jwagal, Kupondole, Lalitpur

Tel: 5525031

#### Notice published in Vernacular Daily



Promotional CD on Government and Public Procurement Portal www.bolpatra.com.np



#### **Photographs**



www.bolpatra.com.np Handover Discussion with His Majesty's Government