

**LAND BANK OF THE PHILIPPINES**

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**BID BULLETIN NO. 2  
For ITB No. 2015-3-212**

**PROJECT :** Check Truncation System Project  
**IMPLEMENTOR :** Procurement Department  
**DATE :** October 6, 2015

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This Bid Bulletin is issued to modify, amend or clarify items in the Bid Documents. This shall form an integral part of the Bid Documents.

The modifications, amendments or clarifications are as follows:

- 1) The Terms of Reference (TOR) has been revised. Please see attached revised pages 1 to 13 and Annexes A1 to A3 of the TOR.
- 2) Certain requirements in the Business Requirements Document have been revised. Please refer to Annexes B1 and B2 for the revisions.
- 3) The responses to bidders' queries are shown in the attached Annexes C1 to C4.
- 4) For the Single Largest Completed Contract requirement, the following are also acceptable:
  - a) two or more similar contracts (could be multi-year) with a single client of which the aggregate contract amount is equivalent to not less than P31.5 million; and
  - b) two or more similar contracts (could be multi-year) involving a single project with multiple clients of which the aggregate contract amount is equivalent to not less than P31.5 million.
- 5) Section VI (Schedule of Requirements), Section VII (Specifications), Form No. 2 (Schedule of Requirements) and Checklist of Bidding Documents have been revised. Please see attached revised pages 69, 71, 72, 73, 78 and 91 of the Bid Documents.
- 6) Another Pre-Bid Conference shall be held on October 15, 2015, 1:00 P.M.
- 7) The deadline of submission and the schedule of opening of eligibility/technical and financial documents/proposals for the above project is re-scheduled from October 15, 2015 to **October 29, 2015, 11:00 A.M.** at the Procurement Department, 25th Floor, LANDBANK Plaza Building, 1598 M. H. Del Pilar corner Dr. Quintos Streets, Malate, Manila.

  
**ALWIN I. REYES**  
Assistant Vice President  
Procurement Department



**LAND BANK OF THE PHILIPPINES**

**CLASS D**

**Check Truncation System (CTS) Project**  
**Terms of Reference**  
(Procurement of Goods and Services)

**Version Number** : 3.0  
**Final as of** : 01 October 2015  
**Printed on** : 01 October 2015  
**Author** : Technical Working Group  
Local 7729

revised

**Document Information****Location**

This document is maintained online in the Check Truncation System (CTS) Project TeamRoom, located at the LBP Lotus Notes Server.

**Revision History**

Version Number	Date	Summary of Changes	Revision Marks
1.0	3 August 2015	Terms of Reference (Final)	Yes
2.0	24 August 2015	Solution Provider Qualifications	Yes
3.0	01 October 2015	Revised TOR	No

**Approvals**

This document has been approved by:

Name	Position/Title	Approval Date	Signature
SVP Julio D. Climaco	Chair, Head Office Bids and Awards Committee (HOBAC)		

**Distribution**

This document has been distributed to:

Name	Position/Title
SVP Julio D. Climaco	Chair, Head Office Bids and Awards Committee (HOBAC)
HOBAC Members	
GTS Project Control Book (PCB)	
CTS Project TeamRoom	

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**1.0 Name and Description of the Project**

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**2.0 Objectives of the Project**

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**3.0 Scope of the Project**

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9.6 Contract Contents

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**Appendix A Business Requirements Document (BRD)**

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**Appendix B Requirements Compliance Form (RCF)**

## **1.0 Name and Description of the Project**

The Check Truncation System (CTS) is the process of removing the original check from the clearing process and replacing the same with its image and electronic payment information for transmission from the presenting bank to the drawee bank through the Philippine Clearing House Corporation (PCHC). The electronic payment information and image, instead of the physical check, will be transmitted throughout the entire clearing cycle. This will eliminate the need to transport paper checks, and make processing of check payments faster and more efficient.

Under the Check Truncation Process, the electronic image and data of a check will be sufficient basis for clearing and updating of the participating bank's Demand Deposit account with the Bangko Sentral ng Pilipinas (BSP).

The Check Image Clearing System (CICS) under the PCHC Automated Clearing System (PACS) will handle the check truncation and will replace the existing Electronic Check Clearing System (ECCS). The target implementation date of PACS-CICS by PCHC is on March 04, 2016.

## **2.0 Objectives of the Project**

To comply with the Philippine Clearing House Corporation (PCHC) Memorandum Circular No.2807 dated February 6, 2015 on the implementation of the CICS.

## **3.0 Scope of the Project**

The project will cover the processes and components necessary for the successful bank-wide implementation of the CICS, but shall not be limited to the following:

### **OUTWARD**

- ✚ Regular Transactions Processing
- ✚ Returns Transactions Processing
- ✚ Auto segregation of On-Us checks (for CCD) from regular outward clearing (for PCHC)
- ✚ Trail for Outward Rejected Checks
- ✚ Reports and Reconciliation

### **INWARD**

- ✚ Regular Transactions Processing
- ✚ Returns Transactions Processing
- ✚ Auto segregation of ICCs (NOW accounts, ACIC)
- ✚ Positive pay (ACIC updating and matching)
- ✚ Interface with the existing verification system (ASVS)
- ✚ Reports and Reconciliation
- ✚ Merging of images (PCHC, On-Us and OTC) for bank statement
- ✚ Check Archival/ Retrieval (search engine)

- Express Clearing Facility (except MDS and NOW accounts- Same Day Settlement/ Credit)

- *\*\*Dollar Clearing Facility*

- *\*\*Warehouse capability of captured images*

*\*\*Required features already included in the base product - to be implemented when PCHC release the requirement.*

Other requirements not mentioned herewith, which shall be required by PCHC later, shall be included in the base product.

### **Software**

- CTS Software with any of the following databases (Oracle Database or Microsoft SQL or IBM-DB2).
  - For CCD (2 active),
    - with at least 14 Data-Entry Correction Balancing (DCB) Facility
  - to be used by 374 Branches nation-wide
  - Head Office (HO) and Disaster Recovery (DR) Site (2)
- PBM License (SQL)
  - For CCD (1 unit)

### **Hardware**

- PBM Server (2 units) – CCD (2 active),
- Hardware Security Module Card (2 units)- (2 active)
- Readers/Scanners- Branches (251 units)
- Personal Computers for CTS:
  - Branches (249 units),
  - CCD (2 units)
- Personal Computers for DCB (14 units)
- Laser Printer (251 units)
- Firewall (2 units)

*Note: See attached Annex A for CTS Hardware and Software Specifications.*

The details and requirements are specified in the attached Business Requirements Document (BRD) version 1.0 dated 28 July 2015.

To ensure the highest degree of compliance of the CTS Project to the Bank's requirements, and to effectively manage change, the project scope likewise covers the following:

- all the requisite software customizations;
- system parameter configuration/setup;
- change management activities like change management planning and communication;

- review of "As Is" processes, business process simplification and improvement;
- documentation and training on the "To Be" processes;
- organizational change assessment and assistance in the implementation of the required organizational and process changes.

The Service Provider must take into account all related implementation activities and processes such as systems integration, project management, system development life cycle, consulting, change management, technology transfer (training and documentation), and maintenance and support. Likewise, the System Provider is expected to conduct a post-implementation review three (3) to four (4) months after the system has been implemented in production, to assess the project performance and the effectiveness of the system.

The Project Management Plan to be used should conform to the following required documents:

- Conceptual Systems Document (CSD) or equivalent document
- Technical Requirements Specification (TRS) or equivalent document
- System Integration Testing (SIT) Certificate as required
- Implementation Plans
- Project Status Report
- Technical Implementation Plan
- Issue Form, if necessary
- Change Request Form, if necessary
- Application Maintenance Manual
- User's Manual
- Prototype

Reported issues/problems related to the CTS Project developed by the System Provider encountered during the first ninety (90) days after pilot implementation shall be addressed by the System Provider.

All acceptable bid prices shall not exceed the Approved Budget for the Contract (ABC), and shall cover all project costs, including, but not limited to the following:

- Hardware Cost
- Software License cost
- Services and software costs
- 1 Year warranty on Hardware and Software starting from the Production cut-over date
- Four (4) year maintenance and support for all hardware and software components (services); after the 1 year warranty period
- Training and training materials;
- Cost of the Software/Intellectual Property Escrow Agreement, if applicable; and
- All applicable taxes.

The following shall be for the account of the System Provider:

- Team building
- Out-of-pocket and other expenses, if applicable;

### **Other Requirements**

- a. The System Provider shall deliver and install the hardware components and management software at LANDBANK's Central Clearing Department, DR Site and Branches.
- b. The delivery and installation of all the hardware components and software shall be in accordance with the Delivery Time/Completion Schedule (Item 5.0 below).
- c. The System Provider shall provide free on-site support service and training during installation and implementation of the system.
- d. All hardware components must be brand new and can process transactions from all branches simultaneously.
- e. All hardware components must be able to store data for at least 6 months.
- f. All hardware components must be able to process outward and inward transactions simultaneously with an average of 150,000 transactions per day.
- g. Warranty and maintenance package for hardware components and software shall be inclusive of costs for labor, parts and other related costs such as travel and lodging. It also covers the following:
  - Assessment Report to be provided upon maintenance.
  - On-site service for the repair or replacement of unit by System Provider's service centers or any accredited service centers.
  - List of System Provider's accredited service centers' locations, contact persons and telephone numbers must be submitted.
  - Service for the repair/replacement of parts/units must be accomplished within 48 hours upon receipt of notice.
  - Phone call assistance anytime within the day from Mondays to Fridays.
- f. The System Provider shall always provide the software for test environment in case of additional enhancement.

### **4.0 Technical and Other Specifications**

See attached Business Requirements Document (BRD) - Appendix A and Requirements Compliance Form (RCF) - Appendix B.

The proposed system must satisfy or exceed the project stakeholders' expectations, and the functional and non-functional requirements in order for the proposed system to be considered.

The vendor must respond to each and every section, sub-section or item/requirement in the attached *Requirements Compliance Form (Appendix B)*, and must provide the following information for each requirement:



- Percentage Compliance (e.g. 100% - for full compliance, nn% - for partial compliance)  
     100% fully compliant, base-product functionality; no customization required  
     nn% partially compliant; customization required
- Required Customization Effort\* (expressed in man-days);
- Cost of Customization Effort\* (expressed in PHP);
- Explanation to expound on the vendors' response.

*\* Budgetary estimation (-10% / +25% accuracy) of the effort and/or cost required to customize the proposed solution to make it fully compliant with the requirement*

## **5.0 Delivery Time / Completion Schedule**

The System Provider shall deliver the CTS Software and PBM Hardware and Software to CCD and designated pilot branches prior to PCHC target UAT testing as follows:

- CCD - 1 set (CTS Software)
  - 1 unit (PBM Hardware and Software)
- Branches - 50 units of PC, Reader/Scanner and Laser Printer with CTS Software
  - Manila Branches - 10      • North Luzon - 5      • Catanduanes - 1
  - Head Office - 15      • South Luzon - 5      • Catarman - 1
  - Davao - 5      • Batanes - 1      • Coron - 1
  - Cebu - 5      • Camiguin - 1

The remaining hardware and software shall be delivered to LANDBANK branches one month before implementation date as agreed with Project Team.

- CCD - 1 set (CTS Software)
- Branches - 201 (new PC, Reader/Scanner and Laser Printer with CTS Software)
  - 166 (CTS software) - for existing units (ensure that the system will run in the existing units)

### **Timeline:**

**On Software:** The vanilla version (PCHC compliant) (with 1 CTS software and 1 PBM Hardware and Software, and 7 units of PC) must be delivered 15 days after contract signing.

The customized system development must be completed within 3 months from contract signing. The project must be completed within six (6) months from contract signing.

**On Hardware:** Units must be delivered on dates agreed upon by both contracting parties, but not exceeding six (6) months from contract signing.

Penalty for non-compliance will be 3/10 of 1% of the total value of the undelivered item for every day of non-delivery.

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## 6.0 Cost Analysis Sheet

### 6.1 Cost Breakdown

Cost Component	Qty	Cost (PHP)	
<b>Software</b>			
CTS Application Software / License/ Hub with any of the following databases (Oracle Database or Microsoft SQL or IBM-DB2). *For Head Office and all LBP Branches (Enterprise License)	1	xxx,xxx,xxx.xx	
PBM License (SQL) with File Transfer Component	2	xx,xxx,xxx.xx	xxx,xxx,xxx.xx
<b>Hardware</b>			
PBM Server	2	xxx,xxx,xxx.xx	
Hardware Security Module (HSM) Card	2	xxx,xxx,xxx.xx	
Reader / Scanner	251	xxx,xxx,xxx.xx	
Personal Computer	251	xxx,xxx,xxx.xx	
Personal Computer for DCB	14	xxx,xxx,xxx.xx	
Laser Printer	251	xxx,xxx,xxx.xx	
FireWall	2	xxx,xxx,xxx.xx	xxx,xxx,xxx.xx
<b>Subtotal</b>			77,295,319.51
<b>Maintenance (unit cost is for 4 yrs.)</b>			
20% of License Fee (4 yrs.) - maximum	1	xxx,xxx,xxx.xx	
18% of the PBM Server Cost - maximum	2	xxx,xxx,xxx.xx	
20% of the HSM Cost - maximum	3	xxx,xxx,xxx.xx	
5 year maintenance (inclusive of 1 year warranty) PC Reader/Scanner Laser Printer	265 251 251	xxx,xxx,xxx.xx	
Existing 166 Units for 4 years (PC, Reader /Scanner, Laser Printer)	166	xxx,xxx,xxx.xx	xxx,xxx,xxx.xx
<b>Subtotal</b>			48,902,820.16
<b>GRAND TOTAL</b>			PXXXX,XXX,XXX.XX

### 6.2 Payment Milestone

Payment Milestone	Amount Due (PHP)
15% Upon Acceptance of Conceptual System Design or equivalent document	XXX,XXX,XXX.XX
10% Upon Acceptance of Technical Requirements Specifications or equivalent document	XXX,XXX,XXX.XX
15% Upon Delivery of Hardware and Software for User Acceptance Testing (UAT)	XXX,XXX,XXX.XX
20% Upon UAT certification	XXX,XXX,XXX.XX
30% Upon Delivery of Hardware and Software for implementation	XXX,XXX,XXX.XX
10% Production cut-over	XXX,XXX,XXX.XX

<b>Maintenance:</b> On Hardware 2 <sup>nd</sup> Year (After 1 yr warranty) 3 <sup>rd</sup> Year 4 <sup>th</sup> Year 5 <sup>th</sup> Year  On Software (4 Years) 2 <sup>nd</sup> Year (After 1 yr warranty) 3 <sup>rd</sup> Year 4 <sup>th</sup> Year 5 <sup>th</sup> Year	XXX,XXX,XXX.XX
<b>TOTAL PROJECT COST (VAT Inclusive)</b>	XXX,XXX,XXX.XX

\*Ten percent (10%) retention fee for every payment milestone, or a special bank guarantee.

**TOTAL PROJECT COST (in words):**

## 7.0 Qualification Requirements

Evaluation Criteria	Minimum Required Performance Standards
<b>A. Solution Provider Qualifications</b> This criterion assesses the service experience and business capability of the System Provider to deliver the proposed solution. <u>Qualification Standards:</u> <ul style="list-style-type: none"> <li>▪ Must have similar contracts in the Philippines or abroad (as principal or with foreign partner) for the last five (5) years.</li> <li>▪ With profitable operations for the past three (3) years</li> </ul>	<u>Documentary Requirements:</u> <ul style="list-style-type: none"> <li>▪ Certifications, at least two (2), issued by the System Provider's previous clients on the satisfactory performance of its product and on the after sales services (i.e. warranty and maintenance)</li> <li>▪ Audited Financial Statements duly received by BIR for the last three (3) years.</li> <li>▪ Service Provider must be included in the list of vendors that have complied/conformed with the standard Image Cash Letter (ICL) Format per PCHC MC 2921 dated 19 August 2015 re: Result of ICL File Validation.</li> </ul>
<b>B. Personnel Qualifications</b> This criterion assesses the relevant work experience and educational attainment of the System Provider key personnel (i.e., Project Manager, Technical Lead, Business Lead and Change Management Team Leads) identified to implement the proposed system.	<u>Qualification Standards:</u> <ul style="list-style-type: none"> <li>✓ Project Manager: <ul style="list-style-type: none"> <li>▪ Five (5) years experience in IT as Project Manager;</li> <li>▪ Three (3) years exposure in banking/finance</li> </ul> </li> <li>✓ Business Team Lead: <ul style="list-style-type: none"> <li>▪ Five (5) years exposure in banks/non-bank financial institutions</li> <li>▪ Knowledgeable on any system or similar system</li> <li>▪ Three (3) years exposure in banking/finance</li> </ul> </li> </ul>

	✓ Technical Team Lead: <ul style="list-style-type: none"> <li>▪ Three (3) years experience as Technical Team Lead</li> <li>▪ Knowledgeable on any system or similar system</li> </ul> ✓ Technical Support Staff : <ul style="list-style-type: none"> <li>▪ Eighteen (18) months exposure in banking/finance</li> <li>▪ Knowledgeable on any system or similar system</li> </ul>
<b>C. Project Schedule</b> This criterion assesses System Provider's timetable in delivering the proposed system within the required timeframe set by the Bank taking into account all customization workaround needed to be done on the base software.	Timeline: ✓ Not more than six (6) months from contract signing

## 8.0 Documentary Requirements

The technical proposal must include the following required information/documents:

- Executive Summary
- Proposed Solution Overview
  - ✓ Architecture (Technical Architecture Components, Technical Architecture Diagram),
  - ✓ Solution components (hardware, software, services), and
  - ✓ Methodology.
- Detailed, Point-by-Point Response to the Requirements Compliance Form (Appendix B)
- Draft Contract
- Statement of Work
  - ✓ Detailed description of all major tasks,
  - ✓ Deliverable items, if any, for each of the major tasks, and
  - ✓ Completion criteria for each of the major tasks.
- Deliverable Items Summary
  - ✓ Description, quantity, delivery media and other details of the deliverables
- LBP Responsibilities
  - ✓ Specific responsibilities relating to resources, skills, infrastructure, documentations, processes, etc., that LBP must satisfy
- Assumptions
  - ✓ Constraints, dependencies
- Schedules
  - ✓ Major milestones,
  - ✓ Delivery schedule, and
  - ✓ Project schedule (major tasks, durations, start and end dates, Gantt chart).
- License, Maintenance, Exchange of Confidential Information, Software/Intellectual Property Escrow, and Other Agreements, if applicable
- Organizational Chart
- List of Projects and Project Team Information using the Project Team Information
- Brief Company Profile

*Revised*

- Analyst reports, articles, brochures, white papers and other relevant materials.

## **9.0 Other Terms and Conditions**

### **9.1 Discussions/Negotiations**

Although the System Provider's proposal may be accepted and a contract may be awarded without discussion, LBP may initiate discussions with System Provider as it deems necessary. The System Provider should be prepared to send qualified personnel to the LBP office to discuss the technical, commercial and other contractual aspects of its proposal.

### **9.2 Proposal Preparation**

To be eligible for consideration, System Provider must meet the intent of at least 80% of the mandatory requirements. Each mandatory requirement with less than 100% compliance must have a work-around for customization to make it 100% compliant.

For recommended requirements, System Provider must meet the intent of at least 70% of the recommended requirements. Each recommended requirement with less than 100% compliance must have a work-around for customization to make it 100% compliant.

Compliance with the intent of all the requirements will be determined by the LBP HOBAC.

#### **9.2.1 Point-by-point Response**

System Provider must submit a point-by-point response to all numbered sections, subsections, appendices, annexes and attachments of this TOR. If no exception, explanation, or clarification is required from System Provider' response to a specific item, System Provider shall indicate so in the point-by-point response with the following:

**"System Provider understands and will comply."**

System Provider must organize its proposal into sections following the format of this TOR, with tabs separating each section.

In case System Provider's proposal does not comply with the specified proposal format, or is difficult to understand, read or lacks any of the requested information, the proposal will be returned for immediate revision.

Responses similar to, "Refer to our literature..." or "Please see www.....com" are not acceptable. All materials related to a response must be submitted together with the proposal and not just referenced. Any references in an answer to another location in the TOR materials must indicate the specific page numbers and sections stated in the reference.

### **9.3 Proposal Submission**

System Provider must submit:

- Three (3) sets (one original and two true copies) of their technical and financial proposals.
- Their proposal to the LBP HOBAC on or before the deadline specified.

Facsimile or electronic submissions are not acceptable.

**9.4 Presentations / Product Demonstrations**

System Provider may be required to make presentations and product demonstrations to clarify its responses.

**9.5 Compliance with Laws, Policies, Processes, Regulations and Standards**

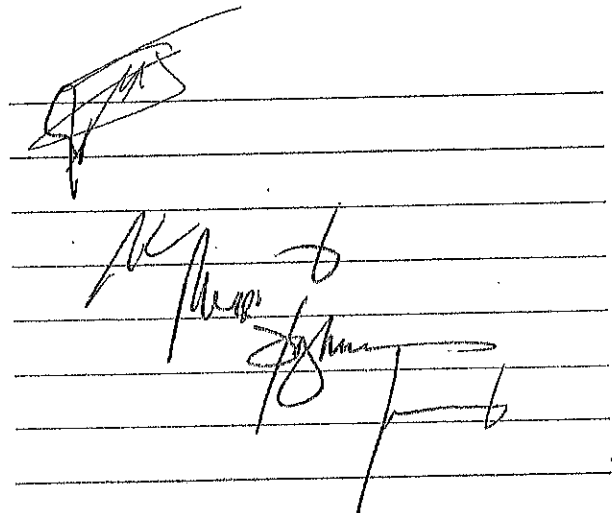
System Provider must, in performance of work under this contract, fully comply with all applicable national or local laws and executive orders, and LBP Project Management and System Development Life Cycle standards.

**9.6 Contract Contents**

This TOR and any addenda, System Provider' responses including any amendments, any best and final offers, and any negotiations shall be included in any resulting contract. *Section 8 – Documentary Requirements*, enumerates all the required information and documents that System Provider must submit as part of its proposal to qualify for further consideration, and will serve as basis for any contract between LBP and System Provider.

**THE TECHNICAL WORKING GROUP:**

Renan A. Lagunzad, ITPMO  
Roger O. Panaguiton, ITPMO  
Sylvester D. Alba, ITPMO  
Reynaldo C. Capa, CCD  
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Divine Grace B. Kuan, RBSD  
Reymond C. Santos, SID  
Atty. Joseph Dennis C. Castro, LSG



# ANNEX A

## CHECK TRUNCATION SYSTEM HARDWARE AND SOFTWARE SPECIFICATIONS

Category		Specific Product (s) Needed	Description / Comments
Hardware	2	PBM Server	<ul style="list-style-type: none"> <li>• Must be compatible to the PBM Server to be provided by PCHC</li> <li>• Tower Type</li> <li>• Intel Xeon E5-2620 v3 2.4 GHz, 15 M Cache, 6C/12T</li> <li>• 32GB RDIMM</li> <li>• 2TB 7.2K RPM SATA 6Gbps 3.5in Hot-plug Hard Drive (1TB Useable, Mirrored Configuration)</li> <li>• RAID</li> <li>• CD/DVR rom DVD+/-RW, SATA, Internal</li> <li>• Dual, Hot-plug, Redundant Power Supply</li> <li>• 1GB Dual Port</li> <li>• Server 2012R2 Standard Edition, 5 USER CALS</li> <li>• Microsoft SQL Server 2014 Standard, OEM Includes 5USER CALS</li> <li>• Keyboard, Mouse &amp; 19" Monitor, USB 2.0 and 3.0</li> <li>• Safenet HSM Card PCI E7000 (Requires PCIe Slot)</li> <li>• 5-Year Parts and Labor, On-site Service</li> <li>• Indicate support structure and services</li> </ul>
Hardware	251	Reader / Scanner	<ul style="list-style-type: none"> <li>• Minimum of 100dpm (w/ UV Light Reader On)- for all documents regardless of size</li> <li>• E13B MICR font</li> <li>• BRSTN Validation</li> <li>• Camera Scanner, Front &amp; Back</li> <li>• UV Light Reader</li> <li>• Auto feeder, double feed detection</li> <li>• Image Resolution : Minimum of 200 dpi</li> <li>• Bi-tonal, Greyscale (UV Greyscale image ready)</li> <li>• Capable to capture images per PCHC requirement               <ul style="list-style-type: none"> <li>◦ Front CCITT UV (inverted CCITT 200 dpi resolution)</li> <li>◦ Front CCITT (200 dpi resolution)</li> <li>◦ Rear CCITT (200 dpi resolution)</li> <li>◦ Front JPEG (100 dpi resolution)</li> </ul> </li> <li>• plug and play</li> <li>• Meets the requirement of the IQA Standard</li> </ul>
Hardware	265	Personal Computer	<p>Processor</p> <ul style="list-style-type: none"> <li>• Intel Core i5 (4th Generation) Processor; 3.20 GHz Clock Speed</li> <li>• 4 MB Cache</li> </ul>

Revised Annex A1

# ANNEX A

			<p>Chipset</p> <ul style="list-style-type: none"> <li>• Intel Q85</li> </ul> <p>Memory</p> <ul style="list-style-type: none"> <li>• 1 x 4GB Double Data Rate 3 (DDR3), 1333 Mhz clock speed expandable to 8 GB, one additional free slot for memory expansion</li> </ul> <p>Hard Disk Drive</p> <ul style="list-style-type: none"> <li>• 500 GB at 7200 rpm SATA (same brand for all PCs);</li> <li>• Partitioned into 100 GB for OS and 400 GB for data</li> </ul> <p>Video Interface</p> <ul style="list-style-type: none"> <li>• 1 MB up to 32 MB Dynamic Video Memory Technology (DVMT)</li> </ul> <p>Bus Architecture</p> <ul style="list-style-type: none"> <li>• PCI-E</li> </ul> <p>Expansion Slots</p> <ul style="list-style-type: none"> <li>• 2 PCI-E slots (net, usable)</li> </ul> <p>I/O Ports</p> <ul style="list-style-type: none"> <li>• 1 25-pin parallel port (internal/not dongle)</li> <li>• 1 9-pin serial port (internal/not dongle)</li> <li>• 6 USB ports (net, usable)</li> <li>• 1 10/100/1000 Ethernet (RJ45) port</li> </ul> <p>Monitor</p> <ul style="list-style-type: none"> <li>• 18.5" flat LCD monitor (wide or non-wide)</li> </ul> <p>Keyboard</p> <ul style="list-style-type: none"> <li>• At least 104-keys, USB connected</li> </ul> <p>Mouse</p> <ul style="list-style-type: none"> <li>• USB connected</li> </ul> <p>Optical Drive</p> <ul style="list-style-type: none"> <li>• 16X Tray-Load DVD-R/W drive</li> </ul> <p>Audio</p> <ul style="list-style-type: none"> <li>• Built-in speaker (factory installed, part no. verifiable in the Internet)</li> <li>• Integrated AC97 Stereo Codec or equivalent or higher</li> </ul> <p>Others</p> <ul style="list-style-type: none"> <li>• Plug-and-Play enabled</li> <li>• ISO 9000 (or higher) certified</li> <li>• Brand must belong to the Top 5 PCs in the world based on 2009/2010 IDC report or latest certification from manufacturer</li> </ul>
Hardware	251	Laser Printer	<ul style="list-style-type: none"> <li>• Print Speed-At least 18ppm</li> <li>• First Page Out-8.5 seconds or less</li> <li>• Print Technology-Monochrome Laser</li> <li>• Print Quality-At least 600x600 dpi</li> <li>• Monthly Duty Cycle- Minimum of 5,000 pages</li> <li>• Input Capacity (Standard)-150 sheets</li> <li>• Output Capacity – 100 sheets</li> <li>• Memory- At least 2MB RAM</li> </ul>



# ANNEX A

			<ul style="list-style-type: none"> <li>• Media Sizes-A4, Letter, Legal, Custom</li> <li>• Media Types- Paper (bond, color, letterhead, plain, preprinted, prepunched, rough) envelopes, labels, transparencies</li> <li>• Connectivity- 1 Hi-Speed USB 2.0</li> <li>• Languages- Host bases printing</li> <li>• OS compatibility- Windows XP, Windows 7, Windows Server 2003, 2008</li> <li>• Power Requirements-220-240 VAC</li> <li>• Cartridge- With Starter Kit included</li> </ul>
Hardware	2	Firewall	<ul style="list-style-type: none"> <li>• Secure Services Gateway 5 with RS-232 Aux backup, 256 MB memory</li> <li>• Three year security subscription for Remote/Branch office, includes AV, DI &amp; WF on SSG5</li> <li>• Operate Specialist 3 Year Prepaid NextDay Support for SSG-5</li> </ul>
Software	1	CTS Application Software/ License / Hub	
Software		Any of the following Databases: Oracle Database or Microsoft SQL or IBM-DB2	Database Platform
Software	2	PBM License (SQL) Microsoft SQL 2012 (or 2014) Standard Edition	Data Platform and connectivity layer
Software	2	PBM File Transfer Component	

## Annex B

### REVISIONS TO THE BUSINESS REQUIREMENTS DOCUMENT

#### Changes in Requirements Classification (BRD)

Document		Requirement	FROM	TO
4.1.4 Branch				
4.1.4.1 Outward Clearing				
CTS BRD p. 9	CTS4141-030	The system shall read the Amount in Figures (Courtesy Amount) of the check using ICR.	Recommended	Mandatory
4.1.5 Head Office				
4.1.5.1 Outward Clearing				
CTS BRD p. 21	CTS4151-010	The system shall have a facility to validate the Courtesy Amount (Amount in Figures) of checks as displayed during DCB.	Recommended	Mandatory
4.2 Interface/Usability Requirements				
4.2.3 WeAccess				
CTS BRD p. 28	CTS4230-002	The system shall accept and process a hand-off file and images from WeAccess for the generation of Outward Return ICL following WeAccess prescribed format. (e.g. RB Return File)	Recommended	Mandatory

## Annex B

### REVISIONS TO THE REQUIREMENTS COMPLIANCE FORM

#### Changes in Requirements Classification (RCF)

Document		Requirement	FROM	TO
<b>4.1.4 Branch</b> <b>4.1.4.1 Outward Clearing</b>				
CTS RCF p. 9	CTS4141-030	The system shall read the Amount in Figures (Courtesy Amount) of the check using ICR.	Recommended	Mandatory
<b>4.1.5 Head Office</b> <b>4.1.5.1 Outward Clearing</b>				
CTS RCF p. 14	CTS4151-010	The system shall have a facility to validate the Courtesy Amount (Amount in Figures) of checks as displayed during DCB.	Recommended	Mandatory
<b>4.2 Interface/Usability Requirements</b> <b>4.2.3 WeAccess</b>				
CTS BRD p. 26	CTS4230-002	The system shall accept and process a hand-off file and images from WeAccess for the generation of Outward Return ICL following WeAccess prescribed format. (e.g. RB Return File)	Recommended	Mandatory

Annex B2