



Dedicated Freight Corridor Corporation of India Limited
(A Government of India Enterprise)

Corrigendum/ Addendum to IFB No: DFCCIL/IT/SI/2011

Corrigendum/ Addendum 1 No: DFCCIL/IT/SI/2011/Corrigendum 1

Supply & Installation of Integrated IT System

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1 General Amendments

#	Document	Page	Relevant section & clause	Existing Information	Amendment to Tender
1	Bid Document	139	SCC related to GCC 10.12	<p>" The Purchaser shall have the following additional responsibilities: Purchaser shall provide seating facility to 10 number of Supplier's representatives in a 15 X 10 sq.ft. room at 4th Floor of DFCCIL HQ at New Delhi, India. However, Supplier would be charged @ INR 250 per sq.ft. per month. The Purchaser shall raise invoice for the same at the beginning of each month and payment would be made by the Supplier within 7 days from the receipt of the invoice.</p> <p>Supplier must NOT assume that the Purchaser would provide/ bear the cost of any item like Desktop/ Laptop, WAN, Stationery, Printer, Fax, Phone, Internet to be used by Supplier representative."</p>	<p>Please read it is "The Purchaser shall have the following additional responsibilities:</p> <p>During the Implementation Phase, Purchaser shall provide seating facility to 10 number of Supplier's representatives in a 15 X 10 sq.ft. space at 4th Floor of DFCCIL HQ at New Delhi, India.</p> <p>During the Warranty period, Purchaser shall provide seating facility for not more than 4 number of Supplier's representatives.</p> <p>Supplier must NOT assume that the Purchaser would provide/ bear the cost of any item like Desktop/ Laptop, WAN, Stationery, Printer, Fax, Phone, Internet to be used by Supplier representative."</p>
2	Bid Document	141	SCC related to GCC 12.1 Table --> Sl. No. 5	Information in column "Milestone" - "Pre-commissioning Test, Pilot Run of the solution at DFCCIL HQ and 3 CPM and signoff by DFCCIL"	Please read it as "Pre-commissioning Test and Sign-off by DFCCIL"
3	Bid Document	143	SCC related to GCC 14	Supplier shall bear all the taxes & duties. Only Service Tax shall be paid by the Purchaser as per applicable law of the Purchaser's country.	Stands deleted.
4	Bid Document	188	Section VI: Technical Requirements → 2.4.3 Security		<p>Following paragraph may be added to Section VI: Technical Requirements → 2.4.3 Security.</p> <p>"It is responsibility of the Bidder to select and deploy components in order to propose a complete solution in line with the requirements as defined in the Bid Document."</p>
5	Bid Document	191	Section VI: Technical Requirements →	"DFCCIL shares documents with external parties; sanctity of which is of prime importance.	Please read it as,

			2.5.1.2 Solution Architecture & Design → Specific Design Considerations (a)	These include documents like Tender WO, Tender PO, Design Document, Measurement book, Tax Return and Company Accounts. Approximately 30 employees in DFCCIL are expected to authorize the mentioned documents through use of Digital Signatures. Supplier should ensure that the envisaged system has proper workflow and functionality to allow authorized users to digitally sign the documents. Refer Attachment 6: Usage of Digital Signature”	“(a) DFCCIL shares documents with external parties; sanctity of which is of prime importance. These include documents like Tender WO, Tender PO, Design Document, Measurement book, Tax Return and Company Accounts. Approximately 30 employees in DFCCIL are expected to authorize the mentioned documents through use of Digital Signatures. Supplier should ensure that the envisaged system has proper workflow and functionality to allow authorized users to digitally sign the documents. CLASS 2 CERTIFICATES, valid for 3 years should be provisioned by Supplier. Refer Attachment 6: Usage of Digital Signature”
6	Bid Document	191	Section VI: Technical Requirements → 2.5.1.2 Solution Architecture & Design → Specific Design Considerations (b)	“DFCCIL can provide space for 4-5 racks ...”	Annexure 4 of the Corrigendum/ Addendum may be added as Attachment 19: Existing Server Room Details Following may be added under Sl. No. Section VI: Technical Requirements → 2.5.1.2 Solution Architecture & Design → Specific Design Considerations → (b) “Please refer Attachment 19: Existing Server Room Details. DFCCIL envisages moving the existing UPS setup out of the present Server Room. Preparation of Hosting Site is responsibility of Supplier and it would include: <ol style="list-style-type: none"> 1. Creation of suitable temporary enclosure with raised flooring in space earmarked by DFCCIL. (The said enclosure shall be utilized for storage of existing UPS setup and the UPS setup, including the battery bank supplied under the scope of this Contract.) 2. Shifting of existing UPS(s) along with required electrical cabling 3. Provisioning and installation of gas based fire suppressant system (FM 200) 4. Re-arrangement of existing racks and

					<p>telecommunication equipment without major disruption of DFCCIL regular operations</p> <ol style="list-style-type: none"> 5. Re-routing / re-cabling – electrical and data connections, conduits, etc. 6. any other activity to ensure appropriate deployment of solution <p>DFCCIL shall provision appropriate cooling, power and earthing to the server room.</p> <p>DFCCIL encourages the bidders to propose space efficient solution. In case additional space is an absolute necessity, DFCCIL may arrive at an optimal arrangement with the Supplier by providing additional space.”</p>
7	Bid Document	192	Section VI: Technical Requirements → 2.5.1.2 Solution Architecture & Design → General Design Considerations → (a)	Solution should have Web based graphical user interface (GUI) for all business functionality which would comply with major web browsers like Internet Explorer, Netscape, Mozilla, etc.	Please read it as, “(a) Solution should have Web based graphical user interface (GUI) for all business functionality which would comply with major web browsers like Internet Explorer, Mozilla, etc. however, power users engaged with administration and management of applications may have thick client based UI.
8	Bid Document	194	Section VI: Technical Requirements --> 2.5.1.5 Solution Implementation	"(s) GIS: Supplier has to develop... "	<p>Information mentioned in Serial number (s) must now be read as;</p> <p>“DFCCIL has CAD drawings defining the alignment of the proposed tracks for various sections. Available CAD drawings are not geo-referenced.</p> <p>Collection of Latitudinal/ Longitudinal values of the (Ground Control Points) GCPs is being done internally by DFCCIL and would be provided to the Supplier.</p> <p>Geospatial data needs to be created from CAD drawings by aligning it with the Latitudinal/ Longitudinal values of the GCPs.</p> <p>No survey related work is envisaged on the part of Supplier. GIS map procurement is also not in the scope of the Supplier.</p>

					<p>In case DFCCIL procures GIS map data along with various layers, the same shall be integrated in the GIS software by the Supplier.</p> <p>Supplier has to develop a user interface including data entry templates, formats and reports that will be used for defining and populating GIS databases and layer(s) for</p> <ul style="list-style-type: none"> • the proposed alignment • for progress monitoring • for railway assets including <ul style="list-style-type: none"> • signals • Road over bridge • Road Under Bridge • Foot Over Bridge • Stations • Level crossings • Maintenance depots • Yards
9	Bid Document	196	Section VI: Technical Requirements --> 2.5.2 Training and Training Materials		<p>Clause 2.5.2.2 Technical The following sentence may be added “Strength of Core Technical Staff would be 5 in number.”</p> <p>Clause 2.5.2.3 Management The following sentence may be added “Management Training shall be imparted to 20 number of people”</p>
10	Bid Document	198	2.5.2.5 Computer Based Training (CBT)		<p>The following sentence may be added under 2.5.2.5 Computer Based Training (CBT):</p> <p>“ The Computer Based Training (CBT) shall be for both Process Training and Application Training”</p>
11	Bid Document	199	2.5.3.2 Managed Services		<p>The following bullet point may be added under clause 2.5.3.2 Managed Services;</p> <p>“DFCCIL expects Recovery Point Objective (RPO) of 3 hours. In-case of Disaster, Supplier needs to ensure the system up and running, to full functionality with the Recovery Time Objective (RTO) requirement of 48</p>

					hours. No recurrent payment will be admissible for the delay beyond 48 hours till the time of full recovery.”
12	Bid Document	200	2.5.4 Data Conversion and Migration		The following paragraph may be added under clause 2.5.4 Conversion and Migration Supplier shall study the parent systems/ files and prepare data before migrating into the host systems. Quality and cleansing of data migration is the responsibility of Supplier. Purchaser will provide decision points to the process.
13	Bid Document	205	Section VI: Technical Requirements --> 4.1.2 Tentative Implementation Timelines --> Sl. No. 6	Information in column "Milestone" - "Pre-commissioning Test, Pilot Run of the solution at DFCCIL HQ and 3 CPM and signoff by DFCCIL"	Please read it as "Pre-commissioning Test and Sign-off by DFCCIL"
14	Bid Document	209	F. Required Format of Technical Bids	5.1 Description of Information Technologies, Materials, Other Goods, and Services	Following items may be included under Section VI: Technical Requirements → F. Required Format of Technical Bids → 5.1 Description of Information Technologies, Materials, Other Goods, and Services as item number “5.1.2 Bill of Quantity included in the Bidder’s response should be exhaustive and complete in all aspect. 5.1.3 Any item not included in Bidder’s response but essential for meeting the Tender requirement will be considered to have been priced & included in the Bid response.”
15	Attachments	6	Attachment 2	Bidder MUST submit a REALISTIC Project Plan. (10 Marks) 1. The Project Plan MUST state the assumptions made while preparing the Project Plan. 2. The Project Plan MUST be supported with a Staffing Schedule for the	Please read it as, “Bidder MUST submit a REALISTIC Project Plan. (10 Marks) 1. Bidder MUST propose a governance structure clearly describing the reporting and escalation mechanism. 2. The Project Plan MUST be supported with a

				<p>Implementation Phase.</p> <ol style="list-style-type: none"> 3. Bidder MUST propose Change Management Plan, Communication Plan and Training Plan 4. Bidder MUST propose manpower deployment plan for Technical Support and Warranty obligations. <p>Bidder MUST propose a governance structure clearly describing the reporting and escalation mechanism.</p> <p>Bidder MUST submit a Risk Management Plan</p>	<p>Staffing Schedule for the Implementation Phase.</p> <ol style="list-style-type: none"> 3. Bidder MUST propose Change Management Plan, Communication Plan and Training Plan 4. Bidder MUST propose manpower deployment plan for Technical Support and Warranty obligations. 5. Bidder MUST submit a Risk Management Plan
16	Attachments	16	Attachment 4: Envisaged Network Architecture		<p>Following paragraph may be added under Attachment 4: Envisaged Network Architecture → Image</p> <p>“The depicted architecture is a representation of DFCCIL's vision of complete solution in terms of Network.</p> <p>The load balanced mentioned in the diagram is Link Load Balancer.</p> <p>Provisioning of Internet connectivity is not in the current scope of Supplier.”</p>
17	Attachments	19	Attachment 5: Application wise User breakup		<p>Following bullet items may be included below the table in Attachment 5: Application wise User breakup,</p> <p>“</p> <ol style="list-style-type: none"> 1. Mail messaging solution needs to be implemented for 250 users (approx.). 2. A total of 10 number of Power Users are envisaged for GIS data management and maintenance 3. Document and Workflow Management System is envisaged to be integrated with most of the Business Applications and primarily used through the Business Applications. All employees would use Document & Workflow Management System

					<p>4. Supplier is free to utilize the industry accepted thumb-rules for estimating the number of concurrent users.</p> <p>5. At present the number of employees in DFCCIL is 250 (approx.). However the solution must be scalable to handle 20% Year on Year growth in the number of employees, till the Construction phase (Year 2017).”</p>
18	Attachments	23	Attachment 9	Sl. No. 13. UPS 60KVA - Number 2	Please read it as "Sl. No. 13. UPS 30 KVA - Number 2"
19	Attachments	23	Attachment 9		<p>The following may be added at Sl. No. 14 of the Table titled for “4.2 System Inventory Table (Supply and Installation Cost Items)”</p> <p>"Sl. No. 14. Intrusion Prevention System - Number 2”</p> <p>Indicative specifications of Intrusion Prevention System as given in Annexure 1 of Corrigendum/ Addendum may be added on page 47 as Item Number 8 of Attachment 13: Indicative Specifications: WAN Equipment</p>
20	Attachments	23	Attachment 9	<p>Table</p> <p>For “4.2 System Inventory Table (Supply and Installation Cost Items)”</p> <p>Sl. No. 7 --> Internet Router</p>	Internet Router at Sl. No. 7 of the table stands deleted.
21	Attachments	23	Attachment 9: Minimum Bill of Quantity		<p>The following may be added after the existing Table for “4.2 System Inventory Table (Supply and Installation Cost Items)”</p> <p>“The Bill of Quantity, specifications of Hardware and Software components mentioned as part of Bid Document is MINIMUM. Bidder may propose higher configuration as per the solution design.”</p>
22	Attachments	25	Attachment 10: Indicative Specification:	Column Header "No. of Cores"	Please read it as "Indicative No. of Cores"

			Computing Hardware		
23	Attachments	25	Attachment 10: Indicative Specification: Computing Hardware	Table on Page 25 Sl. No. 4, 5 and 7	Following note may be added below the table: "Of the above only GIS, ECM and AD modules may be on x86/ equivalent platform."
24	Attachments	25	Attachment 10: Indicative Specification: Computing Hardware	"The Supplier needs to provision 1:1 redundancy in the number of physical servers for the above mentioned requirement. Indicative specifications for the above mentioned server requirement is detailed in the table below."	Please read it as "The Supplier needs to provision 1:1 redundancy in the number of physical servers for the above mentioned requirement. The servers need to be configured in High Availability Mode. Indicative specifications for the above mentioned server requirement is detailed in the table below."
25	Attachments	26	Attachment 10: Indicative Specification: Computing Hardware	"The Supplier needs to size separately for EMS, Mail and Antivirus servers etc. These servers shall be hosted on x86/ equivalent platform. The Supplier needs to decide the appropriate level of physical server redundancy."	Please read it as, "The Supplier needs to size separately for EMS, Mail and Antivirus servers etc. These servers shall be hosted on x86/ equivalent platform. The Supplier needs to decide the appropriate level of physical server redundancy. LDAP, Mail, Antivirus and Backup needs to be in High Availability Mode. Bidder should decide appropriate level of physical redundancy. EMS is NOT envisaged to be deployed in High Availability Mode"
26	Attachments	27	1. Storage	Against Host Ports specification of "8 x 4Gb/s Host Ports"	Please read it as, "Throughput requirement of 32 Gbps"
27	Attachments	27	1. Storage	OS Support "Windows, Linux, AIX, HP-UX, Solaris"	Please read it as "OS Support - Windows, Linux, AIX, HP-UX, Solaris, Unix"
28	Attachments	27	1. Storage	Compliance "RoHS and NEBS"	Please read it as "RoHS/ NEBS"
29	Attachments	27	1. Storage	RAID Level Supported - "0, 1, 0+1, 5, ,6"	Please read it as "RAID Level Supported - "0, 1, 0+1, 4, 5, 6"
30	Attachments	27	1. Storage	Solid RAS Cabling	Please read it as "Solid RAS cabling / FC or IB cabling or equivalent OEM Cabling"
31	Attachments	27	1. Storage	Single Common Array Manager	Please read it as "Single Common Array Management Software"
32	Attachments	28	3. Tape Library	(Reference related to LTO Generation 4)	References related to LTO 4 changed to LTO 5. All specifications related to Tape Library must be LTO 5 compliant.
33	Attachments	28	4. Blade Chassis	Same enclosure should support Intel Xeon/ AMD Opteron/ RISC/EPIC based blades	Specification for Blade Chassis "Same enclosure should support Intel Xeon/ AMD Opteron/ RISC/EPIC based

					blades” stands deleted.
34	Attachments	28	4. Blade Chassis	(Table)	Following sentence may be added under Attachment 10 → Blade Chassis (Table) “Bidder is free to choose combination of Blade/ Rack mounted Servers”
35	Attachments	31	5. UPS for Data Center	Sl. No. 3 "... and /or the abnormal operating conditions such as fire, theft, intrusion, etc."	Please read it as, “The System shall be designed and integrated with the other Facility systems such that it provides fail safe operations of the systems under no-mains / no-power conditions.”
36	Attachments	35	2. CAT 6 UTP Cable	23/24 AWG Annealed bare solid copper, 350 MHz CAT-6 UTP Cable	Please read it as "The component should comply with EIA/TIA 568-B.2-1 standard."
37	Attachments	35	2. CAT 6 UTP Cable	"Conductor Annealed copper wire Diameter 0.52 mm (nominal)"	Please read it as "The component should comply with EIA/TIA 568-B.2-1 standard."
38	Attachments	35	2. CAT 6 UTP Cable	"Insulation High Density polyethylene, Diameter 0.94 mm (nominal)"	Please read it as "The component should comply with EIA/TIA 568-B.2-1 standard."
39	Attachments	35	2. CAT 6 UTP Cable	UL, ETL and 3P verified to “ANSI/TIA/ EIA-568-B-2.1” specifications	Please read it as, “UL, ETL verified to “ANSI/TIA/ EIA-568-B-2.1” specifications”
40	Attachments	37	Attachment 13: Indicative Specifications: WAN Equipment	1 Internet Router	In view of Corrigendum/ Addendum, Sl. No. 20, Specification for Internet Router stands deleted.
41	Attachments	40	2 External Firewall	Sl. No. c in table “Interfaces: 4 Giga Ethernet in the appliance, scalable to 8 GE”	Please read it as "Interfaces: 4 Giga Ethernet in the appliance, scalable to 6 GE"
42	Attachments	40	2 External Firewall	Against Sl. No. e, 8 th bullet point, "PPTP, L2TP"	Please read as "PPTP/ L2TP"
43	Attachments	40	2 External Firewall	“EAP – TLS” and “SIP” shown against item “e” in 2 bullet	“EAP – TLS” and “SIP” stands deleted.
44	Attachments	40	2 External Firewall	Against Sl. No. e, BOTNET filter support	Please read it as "Group Filter Support / DDoS prevention/ BOTNET Filter Support "
44	Attachments	41	2 External Firewall	Against Sl. No. f, IEEE 802.3ad & IEEE 802.3af	Reference to IEEE 802.3af & IEEE 802.3ad stands deleted.
45	Attachments	41	3 Internal Firewall	Against Sl. No. e, “BOTNET filter support”	Please read it as "Group Filter Support / DDoS prevention/ BOTNET Filter Support "
46	Attachments	42	4. MPLS Router - Data Center	Against Sl. No. 7, “The router should support Analog and digital Voice modules with CODECs types namely G.711A law, G.711U law, G.723R53, G.723R63, G.729a, G.729R8”	“The router should support Analog and digital Voice modules with CODECs types namely G.711A law, G.711U law, G.723R53, G.723R63, G.729a, G.729R8” stands deleted.

47	Attachments	42	4. MPLS Router - Data Center	Against Sl. No. 7, "Support for interfaces Channelised E1, Channelised STM-1, Channelised E3, FE and GE"	Please read it as " Support for interfaces Channelised E1, Channelised E3, FE and GE"
48	Attachments	42	4. MPLS Router - Data Center	Against item 7, "Support for transport of IP over ATM, Frame Relay, HDLC and PPP encapsulations"	Please read it as, "Support for Frame Relay, HDLC and PPP encapsulations"
49	Attachments	43	4. MPLS Router - Data Center	Against Sl. No. 10, "3 Gig Ethernet port"	Please read it as "3 Gig Ethernet port (Combo Ports)"
50	Attachments	43	5. DMZ Switch	Against Sl. No. 1, "Port density in each switch"	Requirement shall be read as "24 x 10/100/1000 Base T ports with 4 Gigabit SFP ports (Combo) OR 2 ports of 10 Gig uplinks."
51	Attachments	45	6. CPM MPLS Router	Against Sl. No. 5, "ATM QoS"	"ATM QoS" stands deleted.
52	Attachments	46	7. Core Switch	Against Sl. No. 7 "MPLS Features"	"MPLS Features" requirement stands deleted.
53	Attachments	49	1. Directory Services	Against Sl. No. 1 "Should provide support for X.500 naming standards and should support Kerberos for logon and authentication"	Please read it as "Should provide support for X.500 naming standards and should support PKI or Kerberos for logon and authentication."
54	Attachments	49	1. Directory Services	Against Sl. No. 3 "Should support directory services integrated DNS zones for ease of management and administration/ replication"	Please read it as "Should support directory services which should be integrated with DNS zones for ease of management and administration/ replication."
55	Attachments	49	1. Directory Services	Against Sl. No. 6 "The directory service should provide support for Group policies and software restriction policies"	"The directory service should provide support for Group policies and software restriction policies" stands deleted.
56	Attachments	52	2. Backup Software	Against Sl. No. 9 "Should de-duplicate the data at target, source and media server level without requiring any additional hardware"	Please read it as "Should de-duplicate data without requiring any additional hardware."
57	Attachments	67	Attachment 16: Mail messaging solution specifications → 1. Mail & Messaging Solution	Against Sl. No. 31 "Should enable immediate preservation of a user's deleted and edited mailbox items (e-mail, appointments, tasks, etc.) from both their primary mailbox and Personal Archive. Litigation Hold can be set on individual mailboxes or across the enterprise and also includes an option that automatically alerts users that a hold has been placed on their mailbox."	Please read it as "Should enable immediate preservation of a user's deleted and edited mailbox items (e-mail, appointments, tasks, etc.) from both their primary mailbox and Personal Archive. The solution should also have appropriate mechanisms for enforcing legal compliance"
58	Attachments	68	Attachment 17: Database Server Specification	Against Sl. No. 3 "The database should be able to interface directly with High Availability Clustering Software on UNIX, Linux & Windows"	Please read it as "The database should be able to interface directly with High Availability Clustering Software on UNIX, Linux, Solaris and Windows etc."
59	Attachments	88	Attachment 18 -->	Under the module "Insurance", "Reference to	Reference to "Workman's Compensation" under

			Enterprise Asset Management	Workman's Compensation”	Enterprise Asset Management stands deleted.
60	Attachments	89	Attachment 18 → Human Resource Management Information System		Annexure 2 of Corrigendum/ Addendum may be added as Payroll Module under Attachment 18: Functional Requirement Specifications (FRS) → Human Resource Management Information System
61	Attachments	111 & 112	Attachment 18 → Geographical Information System	Table in page 111 and 112	Existing table on page 111 and 112 defined under Attachment 18: Functional Requirement Specifications (FRS) → Geographical Information System stands deleted. FRS mentioned in Annexure 3 of Corrigendum/ Addendum may be read as Attachment 18: Functional Requirement Specifications (FRS) → Geographical Information System
62	Attachments	113	FRS: Document and Workflow Management System	Under Document view “The Document management system shall support Applet for viewing Image documents”	Please read as "System shall support Image Viewer for viewing documents"
63	Attachments	113	FRS: Document and Workflow Management System	Under Document view “The Image applet shall support comprehensive annotation features like highlighting, marking text, underlining, putting sticky notes on documents, and support for text and image stamps etc.”	Please read as, “The image viewing functionality shall support comprehensive annotation features like highlighting, marking text, underlining, putting sticky notes on documents, and support for test and image stamps etc.”

2 Annexure 1: Indicative Specification: Intrusion Prevention System

#	Specifications
1	The vendor shall proposed Intrusion Prevention System (IPS) based on Advanced Network Processors, Field Programmable Gate Arrays (FPGAs), XLR Processor and Application Specific Integrated Circuits (ASICs).
2	IPS solution must support signatures, protocol anomaly, vulnerabilities and traffic anomaly filtering methods to detect attacks and malicious traffic
3	IPS must provide bandwidth rate limit to control the unwanted/nuisance traffic such as P2P, Online Game, etc
4	IPS should support SSH2/Telnet and HTTPS/HTTP as a means of local management. IPS OS must be based on embedded real time operating.
5	The IPS system shall support network and traffic inspection throughput of up to 1.5 Gbps
6	The proposed IPS should provide the ability to protect up to 10 x 1GE network segments. 4 x 10/100/1000 Copper segments and 4 x 1GE SFP segments.
7	The proposed IPS should support Parallel processing and typical latency should be < 100 microseconds.
8	The proposed IPS should support up to 6,000,000 concurrent network sessions The proposed IPS should support 100,000 connection per seconds setup
9	Must support full stateful redundancy solution (Active-Passive, Active-Active)
10	IPS must support redundant Power Supplies internally / externally
11	The proposed IPS solution should support Filter Configuration which will alert or disable ineffective filter in the event of congestion condition.
12	IPS must support an Out-Of-Band Ethernet management port
13	The proposed IPS must support upgrade of operating system without requiring network downtime

3 Annexure 2: FRS for Payroll Module

#	Functionalities
1	System shall allow user to define different elements for payroll generation
2	System shall allow user to define business logic for compensation for different grades of employees
3	System should be able to taxation rules as part of pay structure
4	System shall have integration with various modules to retrieve data about the elements like those listed below: <ul style="list-style-type: none"> • Pay-scale • Attendance • Leave • Allowances • Leased accommodation details • Loans • Advances • PF payout • Increments • Incentives • Gratuity
5	System shall allow user to update details of arrears/ adjustments
6	System shall calculate tax - payouts for the employees
7	System shall generate payroll as per the employee compensation eligibility and claims and business logic defined for payroll generation
8	System shall print payroll in a predefined format
9	System shall trigger auto-encashment of leaves to the payroll module on roll-over of the financial year
10	System shall generate Last Pay Certificate (LPC) needed during the transfer processing
11	System shall initiate electronic credit of salary or generate funds transfer note for bank as decided by DFCCIL.
12	System should take care of Foreign Service Contribution (FSC) to Parent Organization for deputation staff.
13	System should generate reports related to FSC

4 Annexure 3: Revised FRS for Geographical Information System

#	Feature Category	Function Category	Functional Requirement Description	
1	General	General Requirements	Services Developed as part of the application should be OGC compliant and should support WFS, WMS, GML, XML services	
2			New Functionality addition should be possible through plug-in snippet approach	
			The solution should be able to project the data over google maps.	
3			Should be accessible over slow / dial-up connections (<128 kbps)	
4			Should typically provide response times under 5 seconds for regular transactions	
5	Compatibility	OS / Database & Browser	Should be deployable on all leading operating systems such as Windows 2005/2008 server, Windows Vista, Windows XP, Linux, Unix, Sun Solaris	
6			Should be deployable on all leading RDBMS such as Oracle 10g/11g, MS SQL Server 2008, DB2, Informix etc.	
7			Should support all leading browsers such as Internet Explorer, Mozilla FireFox, Google Chrome, Opera, W3C & HTML5 standards	
8	Language	Language	Unicode support for multi-language implementation	
9	Mapping/Interaction	Map Navigation	Pan and Zoom Map	
10			Pan and Zoom Map with mouse wheel	
11			Pan and Zoom to selected feature/entity	
12			Zoom to full extent of the map	
13			Zoom to full extent of a layer	
14			Zoom to visible scale of a layer	
15			Zoom to specific map scale	
16			Find X,Y (Latitude, Longitude) location on the Map	
17			Create, Manage, Share & Use spatial bookmarks	
18			Create & Access hyperlinks for documents, pictures, imageries etc.	
19			Create & Access hyperlinks to external applications, macro or URLs	
20			User Dynamic Map Tips	
21			Use Magnification Window	
22			Use Overview Window	
23			Interactively reveal areas beneath a map layer	
24			Save and Manage locations for use with multiple maps (My Places)	
25			Map Queries	Identify Features in the Map
26				Interactively Measure Distances and Areas
27				Find Features in the Map
28				Find by Address, including custom locators

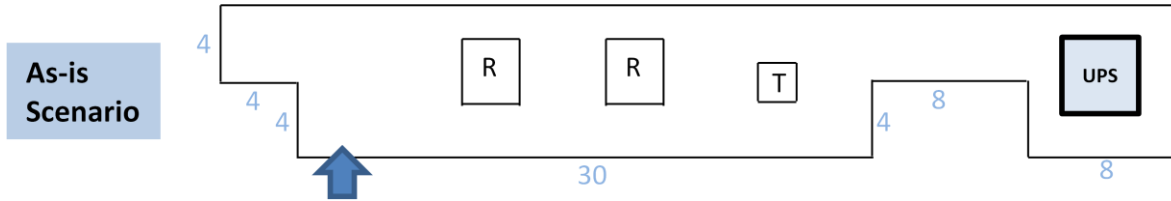
29		Show Related Data with Field Properties
30		Select Data by Location
31		Select Data by Attribute
32		Interactively Select/Unselect Features
33		Unselect All, Switch the Selection, or Select All Features
34		Access Layer Properties from Identify Dialog Box
35	Attribute Tables	Flash, Zoom to, Pan to, and Identify Individual Features in a Map Based on a Record in the Attribute Table
36		Interactively Highlight Selected Records/Features
37		Zoom to and Unselect Highlighted Records/Features
38		Interactively Add and Remove Records from a Selection
39		Copy Selected Records for Pasting into Other Applications
40		Turn Fields Off and On and Change Field Order and Size
41		Modify a Table's Appearance by Changing Cell and Field Size, Font, and Color
42		Use Field Properties of Joined Tables
43		See Properties of Joins and Relates from Table Properties
44		Sort a Table by Multiple Fields
45	Graphs	Plot Data from a Variety of Datasets in a Single Graph
46	Map Display	Visualize the Map Page or a Specific Set of Data
47		Perform On-the-Fly Projection of All Data
48		Enable Full Cartographic Visualization
49		Interactively Set Percent Transparency for All Data Layers
50		Legends Honor Layer Transparency
51		Set a Minimum and Maximum Scale to Display Data
52		Create Custom Relative Scales
53		Clip the Map Display to a Feature or Graphic
54		Create Graticules, Measured Grids, and Reference Grids
55		Create Extent Rectangles for Other Data (Reference and Overview Maps)
56		Convert Graphics (Point, Line, Polygon, Text) to Features
57	Tabular Data Operations	Create On-the-Fly Dynamic Joins between Different Databases
58		Create and Use Many-to-One and One-to-Many Relationships
59		Create Statistics
60		Summarize Data
61		Interactively Change the Visibility of Fields
62		Simplify Field Names with Field Aliases
63		Create Charts and Reports
64		Build Detailed Reports Using Crystal Reports Wizard
65		Sort by Multiple Attributes
66		Connect to and Use Remote Database Tables
67		Display Tabular X,Y Point Data from a File or Table on a Map
68	Vector Data	Control Selection Color for Each Dataset

69	Display Operations	Create MapTips
70		Fix Symbology to a Specific Map Scale
71		Interactively Exclude Specific Features from the Display
72		Control Which Features to Display Using a SQL Query
73		Control Which Data Fields Are Accessible from the Map
74	Raster Data Display Operations	Display Multiband Images by Assigning Color Values to the Bands
75		Use Individual Band Settings
76		Display Each Unique Value with a Discrete Color
77		Display Image Values Using a Color Map
78		Display Multiband Raster Data Using Color Values
79		Save Current Display Statistics
80		Control Raster Display Contrast and Brightness
81		Orthorectify On the Fly
82		On-the-Fly Panchromatic Sharpening
83		On-the-Fly Hillshade Effect for Elevation Data
84		Display Raster Catalog Tiles as a Time Series
85		Import Renderer or Statistics from Another Layer
86		Display Raster Values while Navigating the Map with MapTips
87		Display Raster Resolution in Map Table of Contents
88	Page Layout / Printing	Title
89		Text
90		Neatlines
91		Legend
92		North Arrows
93		Scale Bar
94		Scale Text
95		Pictures
96		OLE Objects
97		Measured Reference Grid
98		Graticules
99	Label & Annotation	Creating Dynamic On-the-Fly Labels
100		Automatic Conflict Detection and Label Placement
101		Label Placement Rules for Setting Priority between Layers
102		Placement Rules for Setting Importance of Labels vs. Features
103		Many Predefined Label Styles (e.g., Highway Shields)
104		Labels Rotate from an Attribute Field
105		Multiple Dynamic Labeling Schemes Built for Each Map Layer
106		Control Which Features in a Layer Display Labels
107		Advanced Text Formatting Tags for Dynamic Label Symbology
108		Use Interactive Label Tools (Callout, Label, Spline, and Paragraph Text)
109	Create Text Annotation Data from Labels	
110	Co-ordinate	Select and Save Coordinate System Definitions with CAD Data

111		Systems	Graphically Align CAD Data with Other GIS Data and Store the Transformation Definition (Georeferencing)
112		Feature Editing	Move, Rotate, Delete, Copy, and Paste
113			Split a Line at a Distance or Percentage
114			Divide a Line Based on a Distance, a Number of Segments, or a Measure Value (M-Coordinate)
115			Buffer Features
116			Copy Lines Parallel to Their Existing Location
117			Merge Existing Features
118			Create New Features by Merging Features in the Same or Another Layer (Union)
119			Create New Features from the Buffer of Existing Features
120			Create New Polygons by Intersecting Existing Feature Classes
121			Clip One or More Polygons with Another Polygon
122			Extend and Trim Lines with Other Features in the Map
123			Attribute Editing
124		Copy Attributes to One or More Rows Simultaneously	
125		Calculate Attribute Values Using Scripts (Field Calculator)	
126		Calculate Attribute Values from a Feature's Geometric Properties (Calculate Geometry)	
127		Validate Attribute Values Using Rules Defining Valid Values (Domains)	
128		Enter Attributes for New Feature as They Are Created	
129	Administration	Administration	System Administration such as user creation, privilege assignment, map authoring / publishing should be possible via desktop/browser interface
130	Architecture	Architecture	System should be compliant with service oriented architecture
131	Authentication & Authorization	Authentication & Authorization	Integration with LDAP should be possible
132	Interfacing Requirements		<ul style="list-style-type: none"> • PMS - Section wise Contract Information (Contractor Details, Milestones, Status of Milestones) • Enterprise Asset Management System - Receive asset details (WIP as well as Commissioned) • Portal - Primary Interface to users • Document Management System - Interface for accessing documents.

5 Annexure 4: Existing Server Room Details

Layout of current Server Room at 5th Floor of DFCCIL HQ building:



(Numeric figure define the measurement in Feet)

Legend,

- T Tel-EPABX
- R Existing Rack

The current cooling capacity available in the server room is 9 TR (Approx.)