



Company Profile

of

Crystal Technology BD

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Introduction

Crystal Technology Bangladesh (cTech) is an ICT organization formed by some renowned professionals and primarily dedicated to manufacturing software's and maintaining application of coordination to implement the software's for several years in Bangladesh. cTech believe that the personality of product depends on the price and performance. With this principal we rooted deeply inside the businesses with low price and high efficiency,

We have a R&D team with high quality, relevant experiences and excellent skill, also has gathered a group of market and project management talents who are well-trained, spirited, and innovational. Its core technology team has been engaged in the development of customized software's.

Businesses and organization users can realize the web-interact work mode with the features of multi-region, multi-system, multi-organization and multi-workflow for better management and maximize profit.

Our systems helps our clients improve the collaboration efficiency, decrease the communication cost, optimize knowledge management, perfect workflow, and finally boost the core competition strength. Our system makes, our clients could enjoy the fastness of work, improvement of efficiency, increase of profit and net work.

We hope to offer you the best services with our advanced technology in technology development, net technology, information system integration, software development, and Internet technology and etc.,. We also hope to cooperate widely with the companies and users in this line to create the new summit together in the new century.

Vision:

We promised to create a dynamic platform for the universal coverage of ICT in Bangladesh as well international arena through modern technology, capacity building activities & awareness raising programs for building moral responsibility & accountability towards the nation.

Mission:

Maximize the coverage of ICT globally, especially in Bangladesh through providing competitive system with reasonable price.

Our Strength:

- Attractive interface
- User friendly
- Application of latest technology
- Support to lower version computer
- Database driven software with quick performance
- Highly secured system
- Online data storage facilities to prevent data loosing
- Customized software based on clients requirements
- Largest integrated system (20 modules) in BD
- Online/Offline support 24x7

Our Domains

- IT consultancy
- Training
- Software development

- Web development
- Blog maintenance
- IT support services
- Training
- System sales
- Call centre
- Networking

Company background

Crystal Technology Pvt. Ltd. (cTech) is a joint venture by SIAM Health Foundation (Thailand), newly formed by few renowned professionals from Bangladesh. The directors of the company have their own stories of many successes. The chairperson of the company is a physician and is highly experienced in public health and healthcare operations – He is a Management consultant in the field of infrastructure development for the last 10 years. The research is always based on medical equipment like MRI, CT, etc. He has a long experience of 12 years of research. The chief executive officer (one of the directors) is our ultimate strength – his expertise has been tested over a period of more than 10 years in respective fields.

We are maintaining relations with a few foreign companies of USA and India for healthcare information management systems. Among those Akhil System, All script LLC, Health Communication Systems LLC, WIPRO and SIEMENS are known by their own names. We have proven track record of implementation of the products with these famous organizations.

We have our office – both are in Dhanmondi, Dhaka; total floor area is about 1650 sq-ft
We have representatives in UK, Canada, USA, Thailand, Malaysia, Dubai, Indonesia and India.
We have training facilities with our foreign counter-parts; this particular facility always keeps our engineers / software developers updated with state-of-art technology and knowledge.

Experience in implementation in different sector

For complete implementation of software we require few intermediary steps like:-

- ◆ All type of ICT training
- ◆ Software Development / Procurement / Customization
- ◆ Testing and debugging of the software in real time simulation / virtual simulation
- ◆ Understanding the complete product with details of each component
- ◆ Orientation of the end-user
- ◆ Feedback from the end-user
- ◆ Tune the entire software for customers' satisfaction
- ◆ Integrate all the components at their optimum level

Our team leader and other members have their real life experience during the implementation process in Apollo Hospitals Dhaka and different hospitals in Dhaka. We are very much successful in orienting various personnel and end-users in those organizations and they are fully running on our systems with a paperless concept.

Analysis of our product and why it would be a better choice

Our developed software's always a combination of different modules for different operations / activities. Functionality of the integrated system is always depends upon - how all the modules are interlinked with each other, how it is interfaced with related hardware and machine coded process.

Even 100% proven but discrete systems – if it not properly interlinked with other systems will not help much regarding overall computerization and it will not help in cost-saving business-automation. On the other hand 100% proven systems-components, if interlinked always (100% time) with each other, will make the overall system unnecessarily busy and it adds more cost to the maintenance as well as business. So system components and modular segments must be interlinked in optimum as per their related interactivity. This particular characteristic makes our products / developed-systems more competitive than any other product in the market.

Expertise areas

- Software development
- Customized software
- Software procurement & commissioning
- Database maintenance
- Web maintenance
- Testing and debugging of the software
 - Real time simulation
 - Virtual simulation
- Understanding the details of customer requirements
- Orientation to end-users
- Feedback from end-users
- Software tuning for customers satisfaction
- Integrated system for optimum utilization of productivity

Our strengths

- User friendly
- Attractive interface
- Highly secured system
- Application of latest technologies
- Support to lower version computer
- Database driven software with quick performance
- Online data storage facilities to prevent data loosing
- Customized software based on clients requirements
- Largest integrated system (21 modules) in Bangladesh
- Online/offline support 24×7

Benefits of system

- Reduce burden of cost, time and excess manpower
- Transparency and reduction of pilferage
- Easy financial management
- Proper personnel management
- Availability of service and management level database
- Smooth data preservation and retrieve
- Online data storage
- Errorless solution

Our unique system

- We have a unique and proven Electronic Health Management system (EHMS) with larger number of modules (21 units) for smooth implementation at clinic and hospital level. We feel honor to express our sincere gratitude to our Research & Development team members for developing and introducing a full package of clinic/hospital management software with following modules.

Our products

- ❖ **Patient registration & appointments**
 - Patient Registration
 - Doctor Appointment
- ❖ **Out patient billing**
 - Patient Registration
 - Advance Collection
 - Due Collection or Refund
 - Consultation Fees
 - Investigation Fees
 - Reports as Required
- ❖ **Out patient management (Common)**
 - Patient Clinical Data
 - Investigation Request
 - Drug Request (Prescription)
 - Patient Diagnosis (ICD 10)
 - Management Plans
- ❖ **In patient management**
 - Patient Registration
 - Patient Admission
 - Patient Transfer (i. Dr. to Dr. ii. Bed to bed)
 - Patient Discharge (Conditional)
- ❖ **Ward management**
 - Patient Clinical Data
 - Patient Diagnosis (ICD 10)
 - Doctor Visit Entry
 - Requesting Medicine to Pharmacy
 - Requesting Investigation to Pathology and Imaging
 - Patient History
- ❖ **In patient billing**
 - Cash/Company Billing (Auto/Manual)
 - Advance Collection & Adjust
 - Multiple payment modes
- ❖ **Diagnostic management**
 - Setup Report Format
 - Result Entry System
 - Report Delivery System
- ❖ **Inventory management system (Asset)**
 - Purchase
 - Register
 - Movement
 - Maintenance
 - Maintenance Schedule (Auto /Manual)
 - AMC Setup (Annual Maintenance Cost)
- ❖ **Inventory management system (Pharmacy)**
 - Purchase Order (PO) Generation
 - Goods Received Note (GRN) Generation

Issue/Sale/Consumption
Maintain Stock Ledger

❖ **Inventory management system (Materials)**

PO Generation
GRN Generation
Issue/Sale/Consumption
Maintain Stock Ledger

❖ **Finance & accounting**

❖ **Management information system (MIS)**

❖ **Human resource management (HRM)**

Staff Recruitment
Joining
Release or Dismiss
Promotion
Reference
Digital Signature

❖ **Admin**

Discipline (Punishment, Awards)
Leave Management
Holiday Management

❖ **Operation management & pay roll**

Job location
Duty Roster
Relocate
Attendance Management
Supervisory System
Salary generation

❖ **Facilities management**

Hospital Services Setup
Doctor Schedule Setup
Corporate Clients Facilities Setup
Security Management (Individual or Group)

❖ **Web page development**

❖ **Network setup**

❖ **Lab interface system (LIS) etc.**

Benefits of Electronic Health Management System (EHMS)

- Ensure first come first serve
- Reduce patient waiting time
- Improve quality of patient care
- Ensure timely service
- Full patient tracking system
- Monitoring quality of services
- Serve large number of clients

- Motivate clients to receive follow-up visits
- Reduce human error and improve efficiency
- Better monitoring and evaluation of service and performance of staff
- Easy providers access to Pathology and Imaging results
- Prescription generation and linked to pharmacy
- Better financial management
- Gather information to meet management challenges
- Educate patients about their diseases and surgical procedures through images
- Readily available data and evidence based decision support system
- Avoid duplications, repetitions, delays, missing records and confusions
- Ensure transparency and discipline
- Good managerial tool to provide cost-effective solution
- Full coverage can provide disease prevalence and patient care data at national level

Professional skill of our core IT team and technical team

Our core IT team is already experienced in the field of software development as well as their proficiency in other software systems has always been praised by their customers. The members of the team have gained their knowledge in Software Development Life Cycle (SDLC) through testing, debugging and implementing the processes in famous hospitals and organizations. Our technical team is highly skilled in the field of interface of a big range of bio-medical equipment with barcode and RFID system. The list below will show few areas where our team leader and other members have shown their experience in developing the process of software development & customization, testing, debugging, orientation, implementation and over-all supervision in hospitals in Dhaka.

| Category | Detail Job |
|---|--|
| Computer Orientation for the Healthcare Information Management System (HIMS) | Basic Computer knowledge and how computer is functioning in hospitals |
| | How HIMS is designed - work flow within the IT system |
| | Knowledge on Network system and Windows & HIMS password policy |
| | Importance of HIMS |
| Patient Registration and Appointment for Out-Patient serial / MHC / Emergency | Registrations with patient information like Hospital ID, Name, Address, Age, Sex, DOB (Corporate / VIP / Cash / Credit patient) - Patient's photograph is also kept as record. This photo can be used for any future reference. |
| Doctor's Duty (OP & IP) | Doctors' Appointment Schedule in OPD, Doctors' leave, Doctors' In-Patient visit, Doctors' Surgery Schedule, Doctors' on-call, Weekly planner as well as yearly planner |
| Patients' Visit and Appointments | Patient's hospital-visit information (doctor visit, investigation, procedure, visit, Surgery, admission, emergency visit) |
| | As per schedule Appointment to be set (prior and walk-in) |
| Fixation of Tariff / Cost Center | Setup of Cost Center, Department, Sub-department, Categorization of Tariff, Setup of different type of tariff |
| Out-Patient Billing | Transaction wise, billing policy wise (cash/ credit/corporate/ discounted) and cashier wise complete billing system. This includes all transaction of patients' visit, investigation, procedure, day-care surgery etc. |
| Barcode System for Laboratory Information System (LIS) | Interface between laboratory machines and HIMS with barcode system, so that every sample collection is being tracked through time of Sample Collection, Result Entry, Result Finalization, Report Preparation, Report delivery, etc. |
| Radiology Appointment Schedule | Machine wise and bill wise (or for non-billed patient) radiology appointment (schedule within time-slots as per machine's function and corresponding doctor's duty) |

| Category | Detail Job |
|--|--|
| In Patient Billing | List of all In-Patient activities, their corresponding bills (package or without package), bill for all in-patient pharmacy medicine used, |
| | Provisional Bill, Advance deposit / Bill |
| | Final Bill (how to handle credit bill / discounted bill) |
| Asset Store | Hospital Asset purchase, distribution management with ASSET SERIAL NUMBER |
| Consumable Store | Management Hospital materials - all revenue items (billable, consumable etc.) purchase & distribution management and inventory maintenance |
| Pharmacy | Purchase of Medicine in Central Pharmacy, distribution to OP Pharmacy and IP Pharmacy, maintenance of Medicine Inventory |
| | Setup of Cost, Sale Price, Expiry Date (with respect to Generic and Brand name) |
| | Departmental medicine & consumables stock management i.g. indent, issue, receive, consumption, approval |
| | Billing information of medicine (includes bar-code system) |
| | Consumption of medicine |
| Human Resource | Employee personal information |
| | Employment history add / edit & Leave Management |
| Duty Roster | Employee Attendance Management with Bar-code reader |
| Medical Record | ICD-10 (Patient diagnosis) Check |
| | In patient admission, transfer, discharge, occupancy report |
| | In patient birth & death register |
| | Patient history with all detail |
| Hospital MIS | All kind of Management Information Report |
| Reception Management | OP & IP Patient Information and tariff list summery |
| Operation Theatre | In patient OT booking information & surgery billing |
| | In patient surgery pre & post operative note |
| | In patient clinical data |
| | In patient surgery pre & post operative diagnosis |
| Food & Beverage | In Patient Food & Distribution Management i.g. Diet billing, nutrition assessment |
| Emergency Room | Emergency Patient Appointment & Information |
| Admission Transfer Discharge | Patient's Admission in Hospital, Bed Transfer, Doctor Transfer & Discharge Management, etc |
| | Management of In-patient occupancy, bed-status visualization, bed block / unblock, change bed status |
| Activities of Doctors and Nurses within Ward (Nurse Station) | In patient vital sign, sign & symptoms |
| | In patient history, physical examination, allergy, alerts & progress |
| | In patient diagnosis by Following ICD10 (Provided By WHO) |
| | In patient drug administration, intake output |
| | In patient investigation & investigation chart |
| | In patient surgeries booking |
| | In patient doctor notes & nurse notes |
| | In patient diabetic chart |
| | In patient referral |
| | In patient management plan |
| | In patient doctor transfer |
| | In patient bed transfer with / without retaining bed & bed retain / release |
| | Over-all in-patient management |
| Nurse Station | In patient medicine request, blood request |
| | In patient doctor visit |
| | In patient package |
| | In patient case sheet, discharge summery |

| Category | Detail Job |
|---|--|
| | In patient all visit |
| | In patient certificate (Death certificate, medical certificate, DAMA certificate, LAMA certificate) |
| | In patient medicine issue - which medicine to be taken home for continuation of treatment |
| Financial Accounting Linkage | Financial Data Posting |
| Financial Accounting | Cost center wise (account head) general ledger and other entry |
| Doctor Accounting | Distribution of Doctor' Share, doctors' accounting management |
| Patient Management / Prescription in Out-Patient Clinic | Patient clinical history, physical examination & different speciality examination |
| | Patient provisional diagnosis, final diagnosis, significant medical data, Usage of ICD-10 |
| | Suggestion for Patient investigation |
| | Medicine advice, by generic name or by brand name of medicine, getting info from previous prescription |
| | Out-Patient management plan with detail advice -admission, surgery, diet, follow-up, etc. |
| | Information on other visit of a particular patient with summery of investigation, surgery, discharge, procedure and other case sheet |
| | Linking Images with medical history |
| Blood Bank | Blood bank management |
| Reporting System of Laboratory and Radiology Diagnosis | Setup of Report format for laboratory investigation and radiology diagnosis |
| | List of all investigation, Pending for sample collection, pending for result entry, pending for finalization |
| | Report printing with proper signatory and report delivery system |
| | Viewing of previous report and patient history for proper diagnosis |
| Linen, Laundry and Housekeeping | Linen, laundry and housekeeping management |

The following list shows the systems where our technical team takes pride in interfacing hardware with core software module:

| System | Description |
|-------------------------|--|
| Laboratory | Equipment (like analyzers) in Hematology, Biochemistry, etc have been interface with core HIMS where no-manual entry is required for Diagnostic Reporting system |
| Radiology | PACS (Picture Archiving and Communication System) we have interfaced SIEMENS / GE PACS with our core HIMS for all type medical imaging equipment. |
| Patient Registration | Patient's photograph is interfaced with registration and admission system |
| Referential Photographs | Consultants can keep of the patients / disease / surgery / procedure for different healthcare purposes. |
| PABX | PABX is interfaced with core billing system so that telephone usage can be billed automatically through billing process. |

Our clients

1. **Centre for Woman & Child Health**
Ashulia, Dhaka
2. **Siam Health Foundation**
Bangkok, Thailand
3. **Centre for Woman & Child Health**
Gulshan-1, Dhaka
4. **BIRDEM**

Shabagh, Dhaka

5. **Islamia Eye Hospital**
Farmgate, Dhaka
6. **Siam Health Care**
Kalabagan, Dhaka
7. **Dhaka Hospital**
Mitford, Dhaka
8. **PK Asia Resource**
Kuala Lumpur, Malaysia