

MARVEL IT SOLUTIONS & SERVICES

HYDERABAD – INDIA

BUSINESS PROPOSAL DOCUMENT

FOR GIS AND PHOTOGRAMMETRY SOLUTIONS

SUBMITTED BY: *MARVEL IT SOLUTIONS & SERVICES, HYDERABAD –INDIA*

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Introduction on Marvel Group of Companies

Marvel Solutions USA:

Whether it is large or small, Marvel has a long and successful track record delivering Oracle services.

We have not attempted to "re-invent" ourselves with the latest technology fad or staff projects with other ERP implementers. We maintain strong relationships throughout Oracle Corporation and Oracle community. We are Oracle All Day Long!

In total, Marvel has executed approximately 30 engagements for Oracle Applications and core technology services across multiple industries and continents. Our customers continue to return to us for advice and follow up work because of our focus on customer care and satisfaction.

Marvel Lifeclinics:

Marvel Lifeclinic International's mission is to be a leading global provider of healthcare management systems to reduce healthcare costs and to improve the health of individuals.

Lifeclinic distributes vital signs health stations around the world. Systems have been developed in 15 languages and are in the United States, Argentina, Australia, Brazil, Canada, China, England, France, Germany, India, Russia and many other countries.

Marvel Mobile Diagnostic MRI:

Marvels Mission is to make MRI less complex, faster, & ease utilization to enhance MRI's potential. & its focus on intelligent technology, increased speed and innovative applications.

Marvel Car Wash Equipment Pvt. Ltd. India :

The objective of the company is to establish a chain of Marvel Automatic High Pressure Carwash centers (CAR BATH) all over India.

The company has its International office in Texas, USA and Indian Office at Secunderabad with branches across India.

Detailed information on Marvel Group can get from <http://www.marvelgroup.net>

& Now

Marvel IT Solutions & Services, Hyderabad – India

Business Overview

2. About Us

Marvel IT Solutions & Services, Hyderabad –India is a business endeavor aiming at serving the needs of the national and global markets through focused, innovative, efficient & quality products and services in all areas of spatial technology and applications. Marvel IT Solutions & Services, Hyderabad –India brings horizontal and vertical integration of satellite/aerial Remote Sensing, Photogrammetry, Positioning applications, GIS databases and applications, GIS web-services and networking of GIS databases.

Incorporated in **2004**, Marvel IT Solutions & Services, Hyderabad –India has a presence in the **US**, and **Middle East**. Marvel IT Solutions & Services, Hyderabad –India has executed challenging in for remote sensing applications and Data integration, Photogrammetry, GPS applications, GIS development and software development.

Marvel IT Solutions & Services, Hyderabad –India has experience in seamless integration of spatial technology and conventional ICT solutions - thus opening up new vistas and niche - areas of applications services.

Marvel IT Solutions & Services, Hyderabad –India has the best professionals in this technology and has a top technical team, who bring with them more than 10 years of experience in spatial technology fields. The team has professional contacts with some of the best international companies and agencies and partners at national and international level to leverage business solutions and benefits.

The Marvel IT Solutions & Services, Hyderabad –India team, with its vast experience and expertise, provides the company the strength to offer innovative, quality and effective solutions to all sectors of government, private enterprise, academia and non-governmental organizations.

Marvel IT Solutions & Services, Hyderabad –India measures its success in terms of the value-proposition it provides its customers to help meet their ROI goals and competitive advantage. Our industry focus is on Utilities, Land Administration, Geological Mapping, Transportation, and Location-based Services.

3. Technical Proposal

3.a Mission/Vision

Marvel IT Solutions & Services, Hyderabad –India is one of the leading Geospatial Solutions Providers in the country. We receive this recognition because of our full-service, turn-key solutions for the GIS industry. Our many years of experience and innovation have allowed us to expand into a new era by offering leading-edge technological services and a consistent forward thinking approach in servicing our customers.

We believe that success is accomplished through **Commitment, Discipline, Integrity, Innovation, Teamwork and Professionalism.**

| | |
|----------------|---|
| Vision | Be recognized as the leading geospatial solutions and analysis company. |
| Mission | Improving our world through geospatial solutions and analytical services. |
| Values | Integrity, Commitment, Teamwork, Innovation, Professionalism |
| Quality | Provide quality products and services in a timely manner that meet or exceed customer requirements |
| Discriminators | <ul style="list-style-type: none"> • Long-term trusted relationships with key customers • Offer full life-cycle geospatial services, from inception to completion • Offer full suite of geospatial services, from surveying to aerial photography, to photogrammetry, to GIS, to hardcopy map production. • One of few firms operating LiDAR and large format digital aerial cameras • Only firm to offer digital aerial photography services with both Z/I DMC and Leica ADS40 • Competitive pricing |

3.b Services & Solutions

i) Photogrammetric Services

Marvel IT Solutions & Services, Hyderabad –India has provided Photogrammetric solutions with Technically Skilled team in Hyderabad & across India. A lot of changes have occurred since this time and we have been a key driver of new technology. Our derived products go through a barrage of quality control procedures designed to ensure a good product. All photogrammetry services are performed using the most advanced softcopy workstations operating the latest proven software tools.



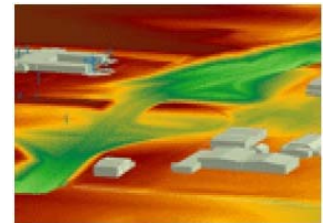
ii) Orthophoto Production



Marvel IT Solutions & Services, Hyderabad–India Orthophotography production team utilizes the most modern systems available. Our experience with Airborne Digital Sensors is unparalleled, as is our ability to produce orthophotography using a variety of techniques and for a variety of deliverables. We are adept in developing projects using LiDAR derived elevation models, as well as the use of Autocorrelated surfaces.

iii) Planimetric Mapping

Marvel IT Solutions & Services, Hyderabad –India captures all planimetric features in a 3D environment, maintaining x,y, and z values for each individual point, line, and polygon. This enables customers to derive 3-D models of such items as road networks, buildings, utility features, and more. We specialize in capturing natural and manmade features for comprehensive GIS solutions or for individual projects. Our techniques and detailed project management assure consistent results and accurate deliverables.



iv) Topographic Mapping



Marvel IT Solutions & Services, Hyderabad –India compilers develop topographic data in a softcopy environment. Their workflow is designed such that edge-matching data results in a seamless project wide topographic representation. Great care is taken to ensure accurate and timely deliverables.

v) Digital Elevation Models

Marvel IT Solutions & Services, Hyderabad –India derives elevation models to support flood mapping, ortho generation, 3D simulation, and more. We develop models using a variety of techniques including traditional photogrammetric techniques, LiDAR, and through autocorrelation of digital aerial imagery.



vi) Terrain Modeling



Today's GIS user is relying more and more on the use of 3D models and visualization. Once limited in scope to video games and Hollywood effects, 3D environments have become part of the evolution of GIS, allowing for analysis in x, y, and z. From property appraisal specialists to the modern day war fighter, the need for highly detailed information in 3D is evident. Marvel IT Solutions & Services, Hyderabad –India is involved in the development and deployment of terrain models to support 3D analysis. Surfaces derived from LiDAR, photogrammetric techniques, and autocorrelated surfaces, provide a framework for which a "skin" of realistic imagery is applied, creating a lifelike 3D scene.

vii) Autocorrelation

Marvel IT Solutions & Services, Hyderabad –India has advanced autocorrelation to a point where it can provide the required Digital Elevation Model (DEM) for digital orthophotography creation. Autocorrelation processes involve mathematical computations of common features found in two pictures captured from different perspectives. This allows us to derive a 3D model very quickly and affordably, providing maximum exploitation of imagery captured with digital aerial sensors while providing a basis for orthophotography, terrain modeling, digital elevation models, remote sensing, planimetric mapping, and more.

viii) Geographic Information Systems

Marvel IT Solutions & Services, Hyderabad –India has provided GIS support on eighteen different software platforms. We understand the intricacies involved in surveying, planimetric mapping, and GIS development. More importantly, we have continually molded our entire operation around the idea of producing a spatially accurate GIS base map. We meet the minimum specifications for photogrammetric mapping and understand every aspect of GIS design, including software and hardware requirements, to ensure the delivery of a suitable GIS base map and a "GIS-friendly" product.

ix) Web-based GIS



Marvel IT Solutions & Services, Hyderabad –India deploys web-based GIS for internal project management and for external customers. Our development goes beyond the simple deployment of "out of the box" software. We provide unique solutions, tailored to our customers' needs and desires. Our sites are robust and feature functionality not typically found in other web-based GIS sites. We develop sites for power users as well as the general public. To do this, we put careful consideration in the design and layout, and provide documentation through online help files.

x) Custom Applications

Marvel IT Solutions & Services, Hyderabad –India develops custom applications for customers of all type. We have developed applications to support state, and local projects.

Solutions are tailored such that the interface allows for seamless access to a relational database designed to replicate and streamline the unique business process involved. Interfaces are built according to the level of the user. Power GIS users get a highly detailed interface for high-end data analysis and editing. General users are given a more simplified menu with pre-packaged routines specific to their needs.

4. Infrastructure

Marvel IT Solutions & Services, Hyderabad –India aspires to become a leading GIS and Photogrammetry services provider. This has guided Marvel IT Solutions Inc, Hyderabad – India to establish to create a work environment conducive for **efficiency** and **innovation**.

Marvel IT Solutions & Services, Hyderabad –India Facilities at Hyderabad and Bangalore comprise:

4.a) Offices

Marvel IT Solutions & Services, Hyderabad –India offices are well equipped with state-of-the-art computing, networking, security and communication infrastructure. The offices are also provided with facilities such as full fledged conference rooms and Audio conferencing facilities. Complete power and system back up to operate 24/7.

4.b) Organizational Hierarchy



4.c) . Human Resource



Marvel IT Solutions & Services, Hyderabad –India recognizes that its people are the primary source of its competitiveness. It is committed to equal employment opportunities for attracting the best available talent and ensuring a cosmopolitan workforce.

4.d) Policy

It will pursue management practices designed to enrich the quality of life of its employees, develop their potential and maximize their productivity. It will aim at ensuring transparency, fairness and equity in all its dealings with its employees.

Marvel IT Solutions & Services, Hyderabad –India will strive continuously to foster a climate of openness, mutual trust and teamwork.

4.e) Hardware

Marvel IT Solutions & Services, Hyderabad –India possesses an array of high-end workstations such as HP Visualize, HP RISC and Compaq.

4.f) Platforms

Windows NT, UNIX, Windows 2000/XP

4.g) Software

Following is the sample list of **GIS and Photogrammetry** software used for providing solutions to our client.

- Z/I
- INPHO
- ESRI
- IMAGINE
- AUTOCAD
- BENTLEY-USTATION
- TRIMBLE
- TERRA SCAN- MODEL
- ER MAPPER
- GLOBAL MAPPER
- ADOBE

4.h) Communication

Broadband network connectivity supports various communication and data transfer facilities like Telephone, Fax, E-mail, and FTP etc.

We also have a dedicated high speed network linked directly to the L&T WAN with our exclusive routers which enable us to connect to 3 technological centers at India with our international business offices around the globe through high speed satellite and terrestrial links.

We possess resources to enable Collaborative Project Management which is increasingly being accepted as the most efficient and effective way to develop products.

5. Quality Management System

Quality management at Marvel IT Solutions & Services, Hyderabad –India ensures that all the activities necessary to design, develop and implement a product or service are effective and efficient with respect to the system and its performance.

Direction by the top management and commitment by stake holders for implementing a Quality Management System (QMS) within an organization clearly defines the system to be effective and assists the department to:

- Manage costs and risks
- Increase effectiveness and productivity
- Identify improvement opportunities
- Increase customer satisfaction

To facilitate institutionalization, our QMS has been deployed on the intranet. The structure of the QMS is shown below:



The QMS is guided by Organizational vision supported by quality policies for each of the processes involved in design viz., Requirements Management, Configuration management,

Technical solutions, Project Planning, Project Monitoring & Control, Verification, Validation etc.

To assist the practitioners in performing the activities consistently & to ensure repeatability, we have defined the processes in detail through procedures & guidelines. These are assisted by templates & tools, as necessary. The learning's & the best practices captured from the projects are utilized for continual improvement. Likewise, a measurement repository deployed on the intranet provides information to the practitioners on the current project performance parameters & other improvement information.

5.a) Integrated Project Management Plan

The design projects are undertaken using a Project Development Life Cycle (PDLC). Marvel IT Solutions & Services, Hyderabad –India has defined as part of its Quality Management System various types of PDLC's / life cycle stages, which are applicable, based on the project's scope.

A typical project development life cycle in development project will have phases like requirement, design, review, verification, prototype development, validation & release. Parallel to the requirements phase, the activities start for preparing an integrated project management plan capturing the following aspects.

- **Scope of the project**
- **Project development life cycle (PDLC) adopted for the project**
- **Project plan: Each project prepares a detailed plan which includes**
 - » Project Objective Targets
 - » Resource plan, Project team Structure
 - » Risk Management Plan, Triggers for causal analysis & resolutions and major decision to be made during the PDLC
 - » Mile stone Review Plan
 - » Configuration Plan & Change management
 - » Verification Plan
 - » Validation Methodology

5.b) Risk Management Plan

A quantitative risk management plan is prepared for every project. The identified risks are continuously monitored & tracked throughout the development. The Risk management process involves identifying the risks, assessing the impact / likelihood of occurrence & then setting up a risk threshold for monitoring. Risk mitigation / contingency plans are prepared & implemented as necessary based on the overall Risk Management strategy adopted by the project.

5.c) Senior Management Review Plan

Monthly project progress status reviewed by senior management encompassing customer satisfaction such as index, delivery process management, knowledge management, cost of quality, defect density and innovations for optimization.

5.d) Change Management

Changes are an inevitable part of design recognizing this aspect; we have devised systems to handle the change requests efficiently. Throughout the project, any change requested by the customer is controlled through change request log, wherein the impact of the change request on the existing work product is analyzed. The changes are then systematically integrated to the existing designs after involving the relevant stakeholders. In case of major changes, discussions are held with the customers to appraise the likely impact of changes on the existing design.

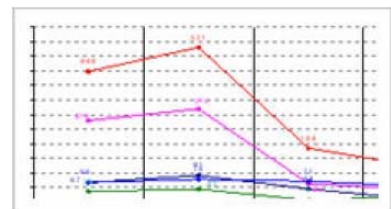
5.e) Project Quality Assurance

Each project is allocated a Project Quality Engineer (PQE) who verifies the project's process compliance on a continuous basis through various audits viz. process audits in every phase of PDLC, work product audits, configuration audits, QA team independent of the projects performs internal quality audit every quarter. QA head reports to the head of Marvel IT Solutions.

5.f) Review Methodology

Reviews are planned based on the project's needs. We have 2 systems for reviews i.e., design reviews & peer reviews.

Peer review process involves setting up an objective for the review, identifying the roles of the review team members, preparing for the review & recording the review findings. After the review is completed, all the review findings are analyzed, responsibility for corrections are assigned and all the findings are traced to closure before using the work product for further development. This type of review is carried out by a qualified person who is not directly involved in performing the design. Statistical quality control techniques are used to monitor the defect trends and analyzed done monthly for proactively triggering causal analysis.



Design reviews are done by involving application domain specialists, project manager & other identified review team members / stakeholders. Most of the project artifacts like requirement specification, Design documents, acceptance criteria etc. undergo a review before they are qualified for the next stage.

5.g) Training

An organizational training group exists which focuses on providing training to the employees based on Strategic & tactical training needs. The training programs cover all areas like Behavioral training (e.g. Personality development, Personal effectiveness etc.), standard training (e.g. Risk Management, Peer Reviews etc.) & Project Specific Technical training.

6. Value Proposition

In a crowded marketplace, Marvel IT Solutions & Services, Hyderabad –India remains differentiated on the basis of our financial and technological strengths and strong engineering pedigree which gives us the ability to engage very closely with our customers on end to end engineering programs spanning all stages of a product lifecycle.

6.a) Why choose our company?

We add value to our customer's processes and products in the following manner:

- Virtual Extended Arm of the Customer
- Significant Reduction of Product Lifecycle Time and Cost
- Innovative solutions
- Quality Assurance and timely delivery
- Proven GIS domain expertise
- Robust Security & business continuity
- Flexible Operating Models
- Ability to engage with customers in large & critical programs

Some of our other strengths includes:

- Customer Focus
- Our well trained workforce
- Rich Domain knowledge
- Strict Quality and information security standards
- Professionalism & Ethics
- Long-term stability and Relationships
- Financial strength
- State-of-the-art Infrastructure
- Excellent Project Management skills

Our strength has assisted us in maintaining focus on serving our customers better.

7. Financial Proposal

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7.3 Major Capital Assets

7.4 Financial Constraints

7.5 Project Success Factors

8. Conclusion

9.1 Effective Management Conditions

9.2 Delivery of Effective Products and Services

8.1 Effective Management Conditions



Effective Management optimization is one area that can help tremendously to optimize the overall performance of GIS and Photogrammetry solutions. To Track and optimize productive maintenance activities based on Quality Management System check lists through out all operational activities on company standard.

8.2 Delivery of Effective Products and Services



Marvel IT Solutions & Services, Hyderabad –India has delivering products on time under the client time constraints framework in effective manner and we are fulfilling our customer satisfaction through quality services.

9. Contact us:

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