



COMMUNICATIONS
NETWORK INTERNATIONAL

Business Profile & Portfolio

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Who We Are?

Communication Network International (CNI) is an Information and Communication Technology consultant-cum-trainer group, engaged in provision of management consultancy services in the field of **Communications Engineering, Satellite Communication Management & ITU Regulatory Affairs, Cyber Security, Information Technology Management, Cross-Platform Software Development (Desktop, Mobile, Web, Cloud), Multimedia & Animation, Digital Marketing** and **Networking** to corporate and industrial sectors throughout Pakistan and UK. We have our offices at Islamabad in Pakistan with business associates in Karachi & Lahore as well. Our approach towards solutions is customer-oriented. We ensure that the requirements for services, operation and control of our valued customers are actually translated into product development programs. We provide cost-effective solutions and endeavor timely implementation & delivery of our services to the market.

We have the experience of developing and implementing communication strategies and establishing communication systems, at nation-wide level with the help of our team, which has on the average 20 years of working experience in the field of **Satellite Communications, Satellite Interference Analysis & Frequency Coordination, Avionics & Radar Systems, Cryptology, Cross-Platform Software Development, Telecommunication Systems** including **payphones, Modeling & Simulations, Graphics & Animations, Gaming, Networking & ISPs, and CCTV Surveillance & Security Systems**.

CNI Solutions also has the expertise in **ICT market** research & analysis, business promotion, developing business ventures and provision of follow-up services. Our team can assist clients in the user requirements definition, market gap research, system/network design, contract negotiations/ collaboration/ proposals/ presentations, and communication system management.

In short, we have the expertise of providing all range of **solutions and services**, from conceptualization to realization of any communication project, may it be in the field of **Satellite Communication, Telecommunication, Internetworking or Software Development, and related technologies**.

CNI Solutions is committed to use all of its resources - financial and human - in an optimal manner to provide above mentioned services and will endeavor to undertake experimentation and innovation, in a planned and deliberate way, to keep pace with dynamic market requirements.

With multi-disciplined professional team at its disposal, CNI is currently providing consulting/ business solutions to its clients in following areas:

- ❏ Satellite Frequency Interference Analysis & Coordination
- ❏ Frequency Spectrum Planning
- ❏ Business Process Automation
- ❏ Cyber Security (Data, Communications, Cloud)
- ❏ Graphics & Multimedia, Modeling & Simulation, Animation & Gaming
- ❏ Digital Marketing (Web, E-Commerce, SEO, Social Media, Video)
- ❏ Cross-Platform Software Development for desktop, mobile, web and cloud platforms
- ❏ ICT Market Research & Analysis, Business Development & Promotion
- ❏ Networking, Call Center Management and BPO Services
- ❏ SQA & Chip Design Verification
- ❏ Cloud Computing & Big Data
- ❏ Artificial Intelligence (AI)
- ❏ Internet of Things (IoT)

What We Aspire?

Communications Network International (CNI) is a team equipped with the latest information technologies to help corporate sector achieve their **information system goals** and provide its clients with technology solutions that meet their business needs.

Our mission is to continually improve our products and services to enable the **organizational planning, control and operational functions** to be carried out effectively. This allows us to prosper as a staff will lead you through the entire development process from gathering the initial requirements, through the installation and any maintenance of the product. We strive to provide you with the highest quality software, on time and within budget.

An Entrepreneurial Spirit

We focus on long-term relationships with staff that is reflected through competency and creativity. To remain in the forefront of today's technology, our software analysts constantly seek innovation. We seek competitive excellence and growth by giving employees the freedom to develop business related to their professional interests. Those who take initiative, and think and act like owners, thrive in our environment. We continue to foster this entrepreneurial spirit.

As our business become more diverse, widely distributed and cost-competitive, we accommodate this spirit within an organization that adapts readily to the market place. We want to maintain our traditional small-company flexibility whenever possible and, at the same time facilitate the creation of crosscutting teams to support larger customer efforts.

CNI success for over a decade has resulted from outstanding people and adherence to fundamental values. Examining our mission and values in the light of changing business conditions and rededicating ourselves to them are essential in achieving future success.

The Highest Standards of Ethical Behavior and Professional Integrity

We are a company, and our employees as individuals, commit to and are accountable for upholding the highest standards of ethical behavior and professional integrity. We create an ethical working environment in which customers and employees are treated with fairness and respect.

Our customers demand this as matter of principle. Our employees expect it as an essential part of a productive workplace. As our business becomes more information-intensive, we accept a special ethical responsibility to protect the private, privileged and proprietary data of our customers.

Our reputation for excellence has been earned by people of exceptional creativity, expertise, and determination, working closely with our customers and each other. Staffing for excellence will continue to be the foundation of our success.

What We Do?

I. Products, Services & Solutions

1.1 Cyber Security Solutions

CNI Cyber Wing has been engaged in providing cyber security solutions and services for corporate sector and industry for more than a decade. We have the capability to develop tools and solutions on multiple platforms such as web, mobile, cloud and desktop. Some of our solutions are as follows:

- a) *Virtual Cyber Range*
- b) *Secure Chat Messenger*
- c) *Secure Voice Communication Application on Mobile*
- d) *Secure Email Solution on Desktop and Mobile*
- e) *Desktop File Encryption Tool*

1.2 Graphics & Multimedia, Modeling & Simulation, Animation & Gaming Solutions

CNI Solutions **Graphics Wing** has its own **Multimedia Studio** that is engaged in highly professional 3D modeling and simulation for academic and industrial applications. We have highly qualified Game Developers and Artists well versed in related tools and technologies like Visual C++, OpenGL, QT, DirectX, 3D Studio Max and Maya. We have our own Gaming Engine under development that sits at the core of our Simulation Applications.

Some of the projects successfully completed are:

a) **Modeling & Simulation**

- *3D Planetarium*
- *Battle-field Simulation*
- *3D Human Head Modeling*
- *3D Architectural Design for House*
- *3D Environment Development*

b) **Digital Art, Graphics, Animation & Multimedia**

- *Hajj Pilgrimage Pop-up Guide Book*
- *Comic Strip Designing and Comic Books for Kids titled "Courage & Bugsy" and "Leprechauns"*
- *Urdu story books for Kids under "Alhambra Illustrators" titled "Shairu & Zaffar"*
- *Karateka (Kids Karate Academy) Campaign Design*
- *Cartoon Poster Design*
- *Package Design for "W. Wilson Acne Cream"*
- *Kalamkari and Fabric Painting*
- *Book re-illustration "Hunger Games"*
- *Book re-illustration "Charlie & Chocolate Factory"*

c) **Game Development**

- *2D Game development using C# and MonoGame*
- *2D Game development using HTML5 Phaser*

1.3 Corporate Web Based Solutions

To access millions of people, the quickest, cheapest and most effective way is through the internet. CNI **Software Development Wing** offers a variety of web-based solutions. Whether you want a simple web page, portal or an e-commerce solution, our experienced web developers can cater to all your web needs.

Some of the web solutions developed by our team are:

- a) *Quality Marketing Services (Trading and Marketing Company)*
Link: <https://tinyurl.com/ybw7bcgu>
- b) *The House of Quality (Management Consulting Company)*
Link: <http://www.thehouseofquality.com>
- c) *PTSD Medical Questionnaire: Online Motor Vehicle Accident (MVA) Medical Report*
Link: <https://tinyurl.com/yb2uwmmw>
- d) *Rehmat Foundation UK (Humanitarian Aid, Rural, Development Charity)*
Link: <https://tinyurl.com/y9vyjyo2>
- e) *Capital Auto Consultants (Automobiles Dealers)*
Link: www.capitalautos.pk
- f) *Al'Muash Sustainable Development*
Link: <https://tinyurl.com/y979ojsn>
- g) *Multan Psychiatric Society (Event website for Multan Psycon 2015)*
Link: www.multanpsycon2015.com
- h) *Center of Management & Emerging Technologies (Training Institute)*
Link: <https://tinyurl.com/ybalzvvh>
- i) *Flightsnflights (UK based Travel Service Call Center)*
- j) *Online Ticket/Issue Management & Response Portal*

1.4 Cross-Platform Customized Software Solutions

Our teams working under **Software Development Wing** have so far developed following software products to develop our client's abilities to fully realize their potentials in developing and marketing their products and at the same time assure its quality.

We have developed following software solutions for multiple platforms

- a) **ERP Business Management Solutions:**
 - *Small Business Management System (SBMS)*
 - *Client Management System (CMS)*
 - *Educational Management system (EMS)*
- b) **Desktop/ Tablet Applications**
 - *Multi-touch Peer Programming Software in Java-FX*

1.5 Chip Design & Verification

CNI **Chip Design & Verification Wing** also has a team of highly qualified Design and Verification engineers for ASIC and FPGA based systems. We possess valuable experience in developing Design solutions and Verification Tools for standard interfaces and we provide both Microcontroller, ASIC and FPGA based Design and Verification solutions for various embedded and PC based applications. We also have experts having experience at PCB Boards Design and Testing for various applications.

II. Projects & Consulting Experience

Communications Network International (CNI) is engaged in domestic activity as well as rendering services in international market. Owing to our quality work in the last 15 years our clients like SUPARCO have posed confidence in us while placing repeat orders for communication and software tools.

In order to improve the effectiveness of our projects we have adopted quality standards and our products are based on innovative designs made by our competent consultants/ specialists.

Therefore, CNI has a wide collection of sources and multifunctional components which are already proven in a number of commercial projects. All these components allow us to realize the client's needs with higher quality in a shorter time with reduced expenditure.

Some of the projects that CNI has successfully undertaken are summarized as follows:

- a) Satellite Interference Analysis & Frequency Coordination for PAKSAT Systems.
- b) Strategic Communication Planning & Strategy Development, Technical Evaluation Studies.
- c) Cyber Security Consulting.
- d) Digital Marketing Solutions.
- e) Multimedia, Graphics & Animation
- f) Telecom Business Development & Market Studies.
- g) Networking Consultancy (Computing & Networking Environment).
- h) Security Consultancy (CCTV & Security Solutions).
- i) BPO Consultancy (International Travel Based Call Center).
- j) Software Development & IT Infrastructure Development.

How We Work?

Communication Network International (CNI) provides Innovative Solutions in the fields of Communication and Information Technology. It takes a structured business approach to communication and networking requirements starting with thorough understanding of the client's needs, and as such provide, **complete turn key solution** to our customer, keeping in mind the clients available resources. We endeavor for complete **Customer Satisfaction** by delivering optimum solutions keeping cost, quality and time, in perspective.

Our professionals carry out in-depth study of our client's Current System / Requirements, which follow the initial analysis phase and an initial prototype of the system, which is presented to final work on the system. The complete design work is divided into different modules, and at each stage, our customer's approval is sought till the completion of the project. Once the application/site is complete, it is thoroughly tested at new test environment, and after it passes this phase, it is implemented as an alternate solution.

The next step involves training of personnel of our clients if required, till the handing over of new application to the customer. We guarantee our work and if bugs and problems are discovered in the application, we fix them without any charge. We also offer our support services and help in enhancement or modification of our clients' system at later stage.

CNI follows international standards and techniques, in order to reduce service lag time and enhance the efficiency and trouble free working environment. Furthermore, we also make effort to acquaint our clients, with new techniques and technologies, to enhance the management capabilities and open up new realms for expansion and profitability.

Network

CNI Solutions has worked with many partners/affiliates across continents to serve our clients:

- a) Transfinite Systems Ltd, UK
- b) Origami Engineering, UK
- c) IABG GmbH, Germany
- d) Helmet Mauell GmbH, Germany
- e) Hybrid Logics, Pakistan
- f) Miken Electronics UK
- g) Widespread Solutions
- h) BadarSoft, Pakistan
- i) E-Commerce Gateway, Singapore (ITCN)
- j) OIC Networks Sdn BHD, Malaysia
- k) PentaLabs
- l) ESATech
- m) Avaya
- n) Cisco Systems
- o) CDigital (Security & Surveillance System), UK/ Pakistan

CNI Solutions and its technology partners have served following clients:

- a) SUPARCO - PAKSAT Pakistan
- b) Shaheen Aero Traders Pakistan
- c) Frequency Allocation Board, Pakistan
- d) TransJordan Communications Jordan
- e) National Telecommunication Corporation(NTC), Pakistan

Quality Policy

CNI is a quality-conscious business organization pursuing national leadership in IT consulting, management and training. It is a company which is built upon foundation of values, to help its clients change to be more efficient and successful. That is why we claim that:

*“ We deliver Solutions and Services **ON TIME**,
EVERY TME that match or **EXCEED**
our Customer Expectations. ”*

Our quality policy is based on the following fundamental principles.

- ❏ We improve quality by focusing on defect prevention through continuous process evaluation.
- ❏ We create working environment that unleashes creative power of the employees and foster high productivity and innovations.
- ❏ We provide training to employees, in required technology that enhances productivity, awareness and sharpens skills in individuals.
- ❏ We promote high ethical standards in all employees that would enable them to imbibe the value of honesty, integrity and reliability.
- ❏ We recognize that measurement of quality is the sum of non-conformity and subsequent cost of getting it right.
- ❏ We promote a **quality-in-all-we-do** philosophy with individual dedication and commitment to continuous improvement.

Our Primary Goals

Consistent with our quality policy, the primary goal of **CNI** is **to achieve superior customer satisfaction, through application of adequate quality assurance and quality control tools**. We are committed to the implementation of supporting managerial and operating procedures, to realize that goal. A positive commitment to quality, and a quick and effective response to achieve the performance standard, is required.

At **CNI**, quality improvement is tackled and followed up in a systematic and planned manner, and quality procedures are followed at every defined step in a project following Process Approach (as defined in Deming's PDCA model of Total Quality Management).

CNI Quality Management System

This section scope contains the broad policies of the company, considering various aspects of quality.

Quality Management System - General

The quality management system is an integrated process throughout the life cycle. This ensures that quality is a part of the development processes, rather than being discovered at the end of the process. We believe in prevention of problem rather than depending on correction, after occurrence. All the quality management system elements, requirements and provisions are clearly documented.

Quality Plans

A quality plan is made to implement quality activities for each software development project, based on our defined quality management system. It ensures functional deployment of quality characteristics into the

organizational project management/ development processes, in such a way that it produces results commensurate to the voice of the customers and their requirements. We believe in preventing problems rather than depending on corrections after occurrence. It is ensured that all our processes are understood and observed in the organization.

Quality Assurance & Controls

Deliverables are reviewed before delivery against stated/ implied requirements by the authorized personnel for accuracy, compactness and cost effectiveness. If any defects or other quality issues are found lacking, then the respective Project Manager is informed. A non-conformance report may be raised to highlight the non-conformities observed.

Internal Quality Management System Audits

A planned and documented system of internal quality audits is carried out to verify whether quality activities comply with planned arrangements and determine the effectiveness of the quality system. Audits are scheduled on the basis of the status and importance of activities. Audits and follow up action is carried out in accordance with documented procedures. The audit results are documented and brought to the attention of the personnel having responsibility in the area audited. The management personnel responsible for the area, takes timely corrective action on the deficiencies found during audit.

Quality Reports

Inspection of the deliverables is done by the authorized personnel before delivery. If any defects or other quality issues are found lacking, then the Project Manager is informed. A non-conformance report may be created to highlight the non-conformities observed.

Management Reviews & Continual Improvement

On annual basis, the management reviews the results of the audits, non-conformances, and overall performance to assess satisfaction of organizational goals/ objectives and established requirements.

Capabilities

Communication Engineering Consultancy

Our experienced engineers provide international consulting in all aspects of communication engineering disciplines including telecommunications and satellite communications. We are representing products and services of Transfinite Systems Ltd UK in this region and closely working with the Government of Pakistan (SUPARCO and FAB) in realization their PAKSAT project.

Satellite Frequency Coordination

Our highly qualified satellite frequency coordination specialists have wide experience in frequency interference analysis, filings, frequency coordination and regulatory support for satellite networks

Project Management Consulting

We have a very strong team of engineers who have more than 20 years of very rich and extensive experience of managing multi-million-dollar communication engineering projects at the international level. Project Management encompasses all phases of project phases including contracts development/ negotiation/ definitization, contractors/ consultant evaluation & selection, procurement management, contracts/ project monitoring, and programme reviews. Our sister company *The House of Quality* is a nationally recognized Quality Management consulting/ training firm having served 150 corporate organizations/ companies throughout Pakistan and Bangladesh.

Cyber Security Consultancy

CNI Cyber Wing has been engaged in providing cyber security solutions and services for corporate sector and industry for more than a decade. We have the capability to develop tools and solutions on multiple platforms such as web, mobile, cloud and desktop. Some of our capabilities are as follows:

- ***Trainings and Certifications in Information Security standards***
 - a. *ISO 27001 Information Security Management System*
 - b. *ISO 22301 (Societal Security - Business Continuity Management System)*
 - c. *CEH (EC-Council's Approved Certified Ethical Hacker Certification)*
 - d. *CISSP (ISC² Certified Information Systems Security Professional)*
- ***Cyber Security Framework***
- ***Cyber Security Tools Development***
- ***Managed Security Services***
- ***Data Protection and Privacy***
- ***Security Consultancy for IoT and Cloud***

Cross-Platform Software Development

Our **Software Development Division** offers a full range of solutions that include

- Analysis, design, development and implementation of specialized customized software solutions
- Testing and Verifications of Software Applications
- Facility management services, including database planning, creation, management, validation and electronic transmission

- Software implementation and post-implementation service and support.
- User training at the client's end and IT skill development

Business Process Automation

CNI Software Developers have good experience in mapping the business processes, identifying the gaps and providing the solutions to improve the processes using ERP solutions. Currently our team of developers has good experience in working with latest technologies such as Odoo and ERPNext. We have been providing services to SME sector to improve and automate their business processes in order to increase efficiency, reduce wastages and increase customer base.

Digital Multimedia Services

CNI has its own **Modeling & Simulation Studio** that is engaged in highly professional services in modeling, simulation, graphics, animation and gaming for civilian and military applications. We have highly qualified Game Developers and Artists well versed in related tools and technologies like Visual C++, OpenGL, QT, DirectX, 3D Studio Max, Unity 3D and Maya.

Digital Marketing Services

CNI has a team of qualified Digital Marketing professionals who have good understanding of the modern global marketplace, its dynamics and are fully equipped to devise techniques and solutions to penetrate the market using modern tools. The digital marketing capabilities include the following:

1. Website Development

To access millions of people, the quickest, cheapest and most effective way is through the internet. CNI offers a vast variety of web-based solutions. Whether you want a simple web page, portal or an e-commerce solution, our experienced web developers can cater to all your web needs.

CNI provides two types of Website Designing facilities:

Web Company Profile:

Companies that are interested in having a Web Presence on the Internet can have their complete profiles designed and developed. Corporate Logos and Corporate color themes along with creative page designing are used to make attractive company profiles.

Web Content/ Product Portfolio:

Companies that are either already on the Web or intend to market their products on the web can have their complete product range presented on the Web. For this purpose, CNI has a formal **Web Studio**, where digital photo sessions and high-quality digital scanners are used to create product profiles. The basic aim of creating high presentation graphics is simply to attract customers and generate sales, either off line or on-line depending upon the dynamism of the site.

CNI has developed many interactive dynamic web-sites for various companies, along with complete web registration to web hosting on the Internet.

2. E-Commerce

In order to increase the market-share, business profitability and revenues by improving the Customer Response through online promotion of products and services using E-Commerce Marketplace as a tool has become a global trend. Such platforms provide mobility, global connectivity and ease-of-access to company's products and services offered on the smartphones.

CNI has expertise in developing online stores and marketplaces seamlessly integrating all the components of customer relationship management, bookings, order placement, shopping cart, admin

dashboard, sales process and after-sales customer interaction using latest social media tools. These applications are developed using data analytics and cloud technologies.

3. Search Engine Optimization (SEO)

To improve search rating on the popular search engine such as Google, CNI's team of Digital Marketing experts provides suitable packages for Search Engine Optimization (SEO) services. This encompasses latest techniques employed right from initial phases of online applications till post-deployment and operations phases.

4. Social Media Marketing

Our Social Media Marketing expertise helps corporate customer promote their online presence using latest social media platforms such as Facebook, Twitter, Tumblr and Instagram.

5. Video & Multimedia Marketing:

We use latest 2D and 3D graphics and animation tools to showcase company's products and services in order to enhance the brand image and customer reach. Video promotion content is marketed at popular video streaming platforms such as YouTube and Vimeo.

6. Infographics

Graphics Artists at CNI are expert in promoting company's ideas, business processes, products and services using infographics. In addition to this we specialize in

Hardware Design and Verification IP

CNI also has a team of highly qualified Design and Verification engineers for ASIC and FPGA based SoC Systems. We also possess valuable experience in developing Verification IP and Tools for standard interfaces for embedded systems. We provide both Microcontroller, ASIC and FPGA based Design and Verification solutions for various embedded and PC based applications. We also have experts having experience at PCB Boards Design and Testing for various applications.

IT Consulting & Networking Solutions

To excel in current transitional world scenario, it is essential to have access to information as soon as it is available. This information will only be available if you are networked with the source of information, be it your customers, suppliers or your office in another country. From simple peer-to-peer networking to WAN (Wide Area Network) solutions, **CNI** can setup a cost effective yet powerful network, to meet your local and global needs.

Beside above-mentioned services we have also provided services in the following fields

- Computer based training (CBT)
- Data Processing, Data creation & delivery

Our experienced staff can design fully integrated solutions for our client organizations including hardware, networking and software solutions, primarily on Windows platforms.

Call Center & BPO Services

CNI has the facilities to manage BPO through our specially designed and highly customizable call center packages supported by VOIP in the following areas:

- *Travel & tourism*
- *Airport services*
- *Taxi transportation services*
- *Remote Troubleshooting & Testing Services*
- *Customer complaint services.*

- *Data Handling Services*
- *Financial services*

Events Management

CNI has been arranging seminars and events for itself and also helped many other companies/ institutes in arranging exhibition stalls in IT Exhibitions held at ITCN and in 4-5-star Hotels like Pearl Continental and Marriott to their entire satisfaction.

From the development of brochures, flyers, designing of stationery, logo, and advertisement in the print media to the promotion on e-media like radio FM 100 with promos and commercials, **CNI** arranged a total solution in media coverage.

