Vision and Mission

Vision
To be a globally respected and trusted partner for innovative, technology based systems for diverse Civil and Defence applications

Mission
To develop world class competency in Design, Development, Manufacturing and Deployment of diverse technology based systems for Civilian and Defence applications through People, Partnerships, Innovation and Integrity
SUN Group’s History

1900s: MINING
Mining and mineral businesses, exporting mineral commodities globally

1958: ENTERS RUSSIAN MARKET
Becomes principal intermediary for capital goods flow and infrastructure between Russia and India
Globally sourcing and selling capital goods, major infrastructure services to India working with extensive network of partners from all major economies around the world

1985: SUN GROUP ESTABLISHED

DIRECT INVESTMENTS – Beverages, Others
- Acquired or invested in a total of 27 businesses in Russia
- 1992: SUN Brewing created after acquiring 5 breweries
- 1994: First GDR of Russian assets
- 1995: SUN Brewing listed in Luxembourg
- 1999: Partnered with Interbrew to create SUN Interbrew

INVESTMENT / PRIVATE EQUITY FRANCHISES
- 1996: SUN Capital Partners founded in Russia
- 1996: SUN F&C created in India with Foreign & Colonial

PRIVATE EQUITY FRANCHISES
- 2000: WestBridge Capital Partners established (now Sequoia Capital India): leading information technology venture capital firm in India
- 2006: SUN-Apollo India Real Estate Fund created: leading India-focused real estate firm

DIRECT INVESTMENTS – Energy & Mining
- 2005: Suntera : JV for non-FSU resources created
- 2005: SUN Mining created
- 2006: SUN Energy Resources created; significant stake in Russian natural gas company ITERA acquired
- 2010: Exited ITERA

CELEBRATING 50 YEARS OF WORKING WITH RUSSIA
SUN Group, among 48 leading international organisations, is a prominent member of the Foreign Investment Advisory Council helping Russia forge and promote a favourable investment climate in Russia.
Russian Prime Minister, Vladimir Putin, decorates Nand Khemka, Chairman, SUN Group, with the Order of Friendship, Russia’s highest civilian honor awarded to foreigners. The ceremony was also attended by Indian Prime Minister Dr. Manmohan Singh.
SUN’s global team

Offices in London, Moscow, New Delhi, Astana & Abuja
Certification

- Industrial License: Govt. of India
- MSME: 1.5 multiplier for Offsets
- R&D Recognition: Ministry of Science and Technology

Registration

- DRDL, NSIC, ABWs, TM(LS)
- MoDs of Sri Lanka, Singapore & Myanmar
- Manufacturing MoUs with foreign OEMs: Israel, Norway and Russia

Patent

- Ruggedized field phone
- IP@CORE (IP-PBX)
<table>
<thead>
<tr>
<th>Location</th>
<th>Details</th>
</tr>
</thead>
</table>
| Electronics Manufacturing: Mohali| - 3 Manufacturing Facilities  
- 7 Acres  
- Build up 300,000 Square feet  
- 150 Workforce  
- Engineers and Diploma Holders |
| R&D and Marketing : Noida        | - 7000 Square feet  
- 60 work stations  
- 50 R&D Engineers            |
| Infrastructure : Bangalore      | - 10 Acres  
- Build Up 100,000 Square feet  
- Close Proximity to key Aerospace Hubs |
| Infrastructure : Bhiwadi         | - 15 Acres  
- Build up 27,000 Square feet  
- Close Proximity to Highway  
- Licensed facility            |

Corporate Headquarters  
Meridien Commercial Tower, New Delhi
Select Clients - Domestic

Indian Army
Indian Navy
Indian Air Force
Indian Coast Guard

Broder Security Force
CRPF
CISF
National Security Guard
NDRF

Indian Police Forces
Indian Railways
Delhi Prisons
Select Clients - Overseas

KONGSBERG
Defence & Aerospace, Norway

Royal Thai Army

Elbit Systems, Israel

Israeli Aerospace Industries / ELTA

Deltacom International, Tunisia

CDS Media LDA, Angola

G R Technologies, Spain
R&D Offerings

1. Hardware Designing
2. Embedded Software
3. Technical Documentation as per MIL JSS 251-01 Standards
5. Product Engineering
6. Ruggedization, Design and Testing
Hardware Offerings

1. Circuit Designing using FPGA logics
2. PCB Designing – designed up to 18 layer boards
3. Expertise in Designing, Switching and Transmission Systems
4. Design and Manufacturing of in-skin Power Supplies
5. Mechanical Housing - design and fabrication
6. Ruggedisation expertise with ‘in-house’ test facilities
Software Offerings

1. Embedded Software, Hardware/Software tradeoff analysis to optimize cost and efficiency
2. Requirement analysis and embedded software architecture design
3. Software systems for Network Management Systems to manage equipment
4. Processors: PowerPC and Freescale Power Quicc, x86, ARM, TI DSPxx, MIPS
5. Operating Systems: Linux, Embedded Linux, Windows CE, and others RTOS like QUADROS, QNX, Nucleus
7. In-Circuit emulators and JTAG debug probes
8. Languages: C, and assembly language for embedded systems supported by Perl, Python, Ruby and Java for build automation, PHP/MySQL/java script for web based applications
9. FPGA: C to VHDL (Catapult)
10. DO standard verification (LDRA)
Value Chain

- User Requirement
- Architecture Designing
- Circuit Designing
- PCB Designing
- PCB Assembly
- PCB/PCBA Verification
- Product Engineering
- Env & Other Tests
- Mil Standards
- Equipment Build
- Ruggedization
- User Trials
- Customer Satisfaction

Value Chain Diagram:
- Value
- Complexity

Process Flow:
1. User Requirement
2. Architecture Designing
3. Circuit Designing
4. PCB Designing
5. PCB Assembly
6. PCB/PCBA Verification
7. Product Engineering
8. Env & Other Tests
9. Mil Standards
10. Equipment Build
11. Ruggedization
12. User Trials
13. Customer Satisfaction
Testing and Evaluation Capabilities

EMI/EMC Testing

XYZ 3 Axis Vibration Machine

Walk-in Environmental Testing Chamber

User/Field Trials

Automated Test Equipment

Rain Chamber
Sectors of Operation

- Networking
- Telecom
- Communication for Railways
- Aerospace, Communication & Electronics
- Internal Security
- Command & Control
- Instrumentation
- Security & Surveillance
Success Stories – Army

1. Tactical Switch for European Client
   - Designed and supplied product compliant to Water Immersion test up to 1 meter
   - User Interfaces as per NATO standard
   - Ruggedization as per MIL STD 810F
   - EMI / EMC Compliance as per MIL STD 461 D/E
   - Documentation as per European MIL standards

2. Tactical Field Exchange for Army
   - Designed and supplied State-of-the-art Ruggedized switch
   - JSS 55555 compliant
   - Ethernet over E1 Mapping
   - EMI / EMC Compliance as per MIL STD 461 E
   - Auto selectable 48/24/12VDC Battery option
   - Inducted after extensive field trials & Para-drop tests
Success Stories – Navy

3. Charlie+ Class Nuclear Submarine

- Designed & Supplied Switching System to meet stringent environmental and EMI/EMC conditions keeping in view LF/VLF communication requirements & Submarine Ruggedization standards

4. Communication System INS Vikramaditya

- Designed & Supplied Feature-Rich Switching System with 8000 port scalability, ISDN, IP, capable of withstanding marine conditions
Success Stories – Air Force

5 Advanced Interoperability Communication System

- Designed and supplied highly advanced ICS, capable of cross-connecting any type of Radio to PSTN, PABX, SATCOM, AFNET and Cellular Networks with capability to work as unmanned gateway
- EMI / EMC Compliance as per MIL STD 461 D/E

6 VoIP Communication System for SAM Project

- Designed & supplied Ruggedized Communication Equipment integrating Command Post and Multiple Launcher Sites
- Special IP based voice logger, Touch Screen Input Device, Ruggedized PA system at Command Post and Launcher sites
Success Stories – Army and Para-Military Forces

7 Ruggedized Tactical Phones for Army

- Bulk production 15000 phones
- Handles Magneto / Analog and Radio connectivity
- Ruggedization as per JSS 55555 MIL STD
- Approved by DGQA / CQAL

8 IP based Interoperability Communication System for NSG

- IP based ruggedized Inter-op solution based on Server-Gateway architecture
- Handles Inter-Op on a remote gateway module through single point administration based on touch screen controls
- Ruggedization as per JSS 55555 MIL STD
9 Software Interface for Defence Aircraft

- Aircraft Upgraded by OEM had incompatibility of software
- Operational capability affected
- Special Data Conversion Tool (DCT) developed as interface to resolve the problem

Emergency Response System for Law Enforcement Agencies

- DIAL 100 Solution
- Integration of our solution with the GPS tracking data
- Server-Gateway architecture integrated with data base of Police
- Command and Control Centres set up based on Computer Aided Dispatch System (CADS)
Success Stories – Homeland Security and Railways

**Voice and Data Connectivity for Homeland Security**

- Networked 18 remote locations spread across the country
- Encrypted and secured communication backbone used for networking between central and remote locations
- Provided Video conferencing facility
- Capability for Remote deployment of VoIP extensions

**Voice and Data Communication for Railways**

- Voice and Data connectivity between HQ and remote offices over 2 MB link, spread over 768 km / 68 stations
- Critical Control Communication over OFC based STM links
- Alternate route during link failure
- Uniform numbering plan across the network
Success Stories - Products

Next Generation Combat Net Radio Gateway
Ruggedized Voice Command & Communication System
Ruggedized Field Telephone
IP based Voice Logger
Radio Adapter Unit
Remote Controlled Power Unit
Success Stories - Products

Intelligent Vehicle Intercom System (i-VIS)

Built in Ship Communication System

iVIS – Crew Unit

IP Tactical Field Exchange

iVIS – Commander Unit

Multiplexer
Products under Evaluation by Clients

- **IP@CORE**
- **Mini Mobile Communication Pack**
- **IPT1001 – VoIP Field Telephone**
- **VFT1001 – VoIP Field Telephone**
Technology Partners

1. ELTA (Israel) – Airborne Intercom System
2. Kongsberg (Norway) – Tactical IP Radios
3. Prima (Russia) – Airborne Radios
4. Chemring (UK) – Tactical GSM based BTS
5. Reutech (South Africa) – Airborne Radios
6. GEW (South Africa) – Electronic Warfare
<table>
<thead>
<tr>
<th>Name &amp; Designation</th>
<th>Professional Experience</th>
</tr>
</thead>
</table>
| **Mr. Jayaraman Shankar**  
Executive Director  
Operations  
(Helicopter Division) | Former GM of HAL Helicopter Manufacturing & MRO Division; Alumni of IIM; 3 decades of experience in HAL; Worked in leadership position for more than a decade in Indian auto industry & Indian Engineering Services |
| **Mr. N Seshadri**  
Director  
Engineering  
(Helicopter Division) | Former Director of Helicopter Design (RWRDC) at HAL; Post Graduate from IISC and Grandfield UK; 4 decades of experience in Helicopter Design & responsible for design & development of Rotor Head & gear Box for Indian Helicopter Programs |
| **Cmde SL Deshmukh**  
Senior Vice President  
Industrial Co-operation | Former Principal Director Naval Air Material at Naval HQ; 3 decades of experience in Operations, maintenance & project management in Aerospace & Naval Platforms; Masters in Engineering |
| **Col Rakesh Juneja**  
Senior Vice President  
Offset Management | Former Director In Defence Production and handling DOFA in GOI; 27 years of experience in Operations & project management with Indian Army, MoD and Industry; PSU Management; Bachelors in Engineering |
| **Mr. Pradnyil Usgaonkar**  
Director, Operations & Member of the Board | 3 decades of experience in Operations/Manufacturing/Corporate Management of Communication Industry; Post Graduate in Management and Graduate in Engineering |
# Top A&D Team

<table>
<thead>
<tr>
<th>Name &amp; Designation</th>
<th>Professional Experience</th>
</tr>
</thead>
</table>
| **Mr Arun Sharma,**  
*Director*  
*R&D* | Electronics & Communications engineer, He is the head of all Technical design initiatives at Elcom. Instrumental in designing communications platforms which have been deployed in critical defense programs |
| **Mr Harish Sharma**  
*Director*  
*Product Engineering* | Head of Hardware design group at Elcom and has been instrumental in designing of ruggedized military grade systems. |
| **Mr Rajeev Vats**  
*Director*  
*Software Engineering* | Head of Software design group at Elcom. Instrumental in design and development of all embedded software applications |
| **Mr P. Rajeev**  
*Vice President*  
*Product Development and Projects* | Responsible for deciding on the technical roadmap, In-charge of planning of all R & D projects from conceptualization to delivery stage. Authored and monitored all QC processes in R & D and production |
Thanks