ALBEDO Telecom

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SGC-MAN
Quality Manual

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CHANGES			
Version	Date	Scope	Comments
00	11/04/16	First Draft	Creation
01	13/05/16	Full revision / references	Public while official version
02	13/10/16	(see Paragraph)7	Addtion of new register for infrastructures
03	30/09/17	Migration to ISO 9001:2015	New strcutrue and scope
04	30/11/17	Control of external processes	(see Paragraph 8.4)
05	16/01/18	Change of name	SGC-NCR: No conformity register now is REG-NCR

AUTHORIZATIONS			
Function	Name / Signature	Position	Date
Editor	PCA	Quality expert	16/1/18
Approved	Jose M Caballero	General Manager	30/10/2017

DISTRIBUTION

Distribution of this manual is done electronically. The on-line version of this manual located at <http://www.tele-com.albedo.biz/ISO9001/ISO9001-ALBEDO.html> is the only "controlled" document. Paper copies of this document that are printed and distributed to customers and ALBEDO employees are to be considered "Uncontrolled".

The system supported by Revision No. 10 of this manual is compliant with the requirements of ISO 9001:2015, and other quality Standards referenced, according to ALBEDO Teleocom.

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ALBEDO Commitment

ALBEDO is COMMITTED to the never ending quest for PERFECT QUALITY:

- NO Field Failures,
- NO Customer Returns,
- NO Reliability Failures,
- NO Yield Loss.

But General SATISFACTION.

Purpose

This manual defines the ALBEDO TELECOM responsibilities for the company quality system. This manual is the foundation of the quality system, which is based on ISO 9001 striving for continual improvement.

Quality policy is to achieve sustained, profitable growth by providing services which consistently satisfy the needs and expectations of ALBEDO customers. Achievement of this policy involves all staff, who are individually responsible for the quality of their work, resulting in a continually improving working environment for all. This policy is provided and explained to each employee by the Managing Director or Quality Manager.

Approvals

The General Manager has approved this manual within the document control database. Changes to this manual must also be approved by the GM.

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1. SCOPE

This Manual covers the all the procedures involved with the design, sales and support of ALBEDO products but do not cover the manufacturing that is being externalized.

1.1 Company Background

ALBEDO Telecom is a private company specialized on manufacturing test, measurement and monitoring solutions for the telecom industry. We facilitate mobile and telecom operators the installation, troubleshooting and maintenance of those infrastructures that are supporting voice, video, internet and data services.

1.2 Products and Services

ALBEDO core expertise range from LTE, 3G, SyncE, GbE, E1, TDM, Jitter/Wander, QoS, SLA technologies that we have implemented on WAN emulators, filtering/aggregation Taps, hand-held Testers, and centralized managed Systems. ALBEDO telecom is represented by a distribution network covering more than 30 countries in all five continents.

2. NORMATIVE REFERENCES

The following document, and supporting documents, are normatively referenced in the governing specification. Unless otherwise specified, ISO 9001:2015 applies.

Other subordinate documents of this manual that contain references will provide the necessary referrals.

3. TERMS AND DEFINITIONS

For the purposes of this document, the terms and definitions of ISO 9001:2015 apply.

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4. CONTEXT OF THE ORGANIZATION[1]

4.1 Understanding the organization and its context

ALBEDO Telecom offers a full range of products, systems and services to help you make the most of your investment on telecom applications and infra-structures. We are ready to partner with you to quickly roll out your network, maximising performance and minimising maintenance. Our technical advisors, network systems engineers and software developers will help you to design, build, manage and troubleshoot your network, making your business more profitable.

Commitment to the Customer's Needs

Our solutions and services integrate with your business ever since the beginning, and we will help you to get answers to questions such as:

- What type of application does your network support?
- How fast can your network go?
- How can I emulate real network conditions?
- Which tools do I need to install and trouble shoot my network?
- How can you train your engineers?
- Who can design this hardware I need?
- Where can I manufacture my complex electronics device?
- How can I test and you have test resources?
- What is the cost of downtime?
- Is the network ready for Voice over IP?
- How can monitor the new Sync-E network?
- Who can design a PTP synchronization approval test suite?

Our experts will help you to find the weak spots of your network, offer alternatives and advise you on what to do, when and why. At ALBEDO, we understand how essential networking is to your business. We also know that there are so many different technology solutions but only a few can really achieve the SLA you need. We can advise you to make the right decisions, to certify the quality of your network, or verify your provider is matching our requirements, therefore you will rest assured that your network investment is well protected.

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1. See SGC-CTX Context and Scope

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Internal and External Parties

Whether you need help with a specific network problem now, or you are still at the planning stage, ALBEDO has a solution for you. From the best market equipment to serve your particular network, to web-based monitoring systems offered to many professionals around the world.

ALBEDO Telecom can develop customized solutions that will be even manufacture in our premises in order to provide you a 100% guarantee of top quality. We are more than willing to share our know-how with your organization's system engineers.

Wealth of Knowledge

From electrical to optical, from wide area to Gigabit, from core to edge - ALBEDO lives and breathes networking. Our team of instructors and engineers provide you with a network of knowledge that can be very profitable for your business. Our experts are constantly studying the market, developing new technology, solving problems for organisations worldwide, and giving a whole new meaning to efficient and secure network management.

4.2 Understanding the needs and expectations of parties

ALBEDO Telecom shall determine interested parties (i.e. customers) that are relevant to the Quality Management System, and the requirements of these parties. ALBEDO Telecom shall monitor and review information about these parties and their requirements. Additional information about these procedures is detailed throughout this manual.

4.3 Determining the scope

To define how ALBEDO's quality system shall be documented, implemented, and checked, to ensure it is understandable. All processes have been identified and documented within our quality system. The sequence and interaction of our operations are described in the Quality Manual.

The criteria and methods of operation have all been documented within the quality system with references to information as required. All processes are to be measured, monitored, analyzed and continually improved upon.

Scope

ALBEDO overall Scope of Work which is stated in our ISO 9001:2015

"To Provide the Most Innovative Telecom Solutions"

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4.4 Quality Management Systems and its processes

To define how ALBEDO's quality system shall be documented, implemented, and checked, to ensure it is understandable. All processes have been identified and documented within our quality system. The sequence and interaction of our operations are described in the Quality Manual.

The criteria and methods of operation have all been documented within the quality system with references to information as required. All processes are to be measured, monitored, analyzed and continually improved upon.

Documentation Requirements[2]

General

The following documentation shall be controlled on the quality server as well as defined in the quality manual utilizing revisions and implementation dates; all procedures to define processes throughout the organization in accordance with ISO9001 standards, quality and design records, the quality manual, and quality policy of the document.

Must be readily identified and retrievable; this includes obsolete versions which shall be clearly identified as obsolete and kept on file for reference.

Quality System

The Quality Assurance System applies to all activities of the Company, and has been developed in accordance with ISO9001. The Quality Assurance System is fully documented and structured in 3 levels:

1. *Quality Manual*. This document you are reading that details the corporate quality policy and structure of the Company and references to the appropriate Operating Procedures.

2. *Operating Procedures*. These documents describe the actual process, and controls applied, to all activities concerned with the attainment of a quality assured contracting service.

3. *Procedures Control*. This document includes last changes and events applied in each procedure

Control of Quality Records

All quality records, generated as a result of maintaining this quality system, shall be kept as evidence of the effectiveness and compliance of the QMS. All applicable records will be identified, as well as have their retention time specified, and stored in a suitable environment.

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2.   Reference procedure: SGC-LST

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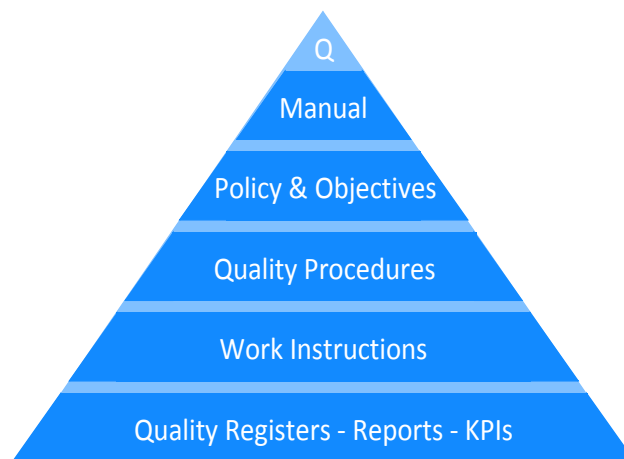
Figure 1   *Quality in ALBEDO Telecom according ISO 9001-2015*

Policy

ALBEDO Telecom has established a Quality Management System to achieve the company's Quality Policy, ensure product and service quality, and promote continuous improvement. The QMS has been instituted in accordance with the requirements of ISO 9001:2015, and is comprised of:

- Quality Policy and Objectives

- Quality Manual,which defines the company'spolicies for achieving quality

- Operating Procedures,which define major processes, including: Process owners, Responsibilities and authorities, Inputs and outputs, Inputs and outputs, Risks and opportunities, Critical and supporting resources, Criteria for effectiveness of the process.

- Work Instructions,which define specific tasks

- Project Management Plans, which define specific project requirements

- Quality Records,which provide evidence of processes performedand results achieved

- Drawings, specifications, and standards

- Resource calibration system

- Employee training programs

- Subcontractor evaluation and control programs

- Document, Data, and Recordc ontrol systems

- Corrective Actions

- Performance measurement system

- Internal Auditing, to verify QMS compliance and adequacy

- Management Review,to analyze QMS performance, initiate improvement measures, and assign resources accordingly

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Metrics

Throughout the year, metrics data is collected by process owners and measured to be presented during the Management Review, in order that adjustments may be made and goals set to achieve long-term continual improvement.

- Specific quality objectives are defined for each process in their respective Operating Procedure

- Metrics, along with current standings and goals for each objective, are recorded for Management Review

5. LEADERSHIP

In ALBEDO senior management is firmly committed to the pursuit of product and service quality, customer satisfaction, regulatory compliance, and continuous improvement. This commitment is demonstrated through rigorous application of the Quality Management System, as defined herein, by:

- Taking accountability the effectiveness of the Quality Management System

- Ensuring the Quality Policy and Objectives are established and compatible with company goals

- Ensuring integration into other business process, as appropriate

- Promoting awareness of the process approach

- Ensuring resources are available for effective Quality Management

- Communicating the importance of effective Quality Management and conforming to the Quality Management System requirements

- Ensuring intended results are achieved

- Engaging, directing, and supporting personnel to contribute to Quality System effectiveness

- Promoting continual improvement

- Supporting other management roles and their related areas of responsibility

Management Commitment[3]

The management at ALBEDO communicates the importance of this quality system, by meeting customer, regulatory and legal requirements. The ways in which this is achieved are as follows:

- Reviews of our quality policy and objectives

- Ensuring adequate equipment, training and other resources are provided

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3. Reference Procedure: SGC-POL

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5.1 Customer Focus[4]

Directors have to ensure that customer requirements are determined and are met with the aim of enhancing customer satisfaction.

5.2 Policy[5]

The quality policy is to be communicated to all ALBEDO employees. The Quality Policy are taught to the staff during the training, being updates mandatory for all personnel. The policy will be posted within the facility in various places, as a reminder to all employees what we must strive for.

Company Objectives[6]

Objectives for the company have been established to ensure that our business while quality policy is met. These objectives are realistic and continually monitored as part of review process. The Quality Manager shall publish measurable goals and objectives annually while goals have also been set as part of the product and quality specifications for each solution that we build.

Quality Management System Planning

Each Department (BU), Manufacturing and Customer Support have the responsibility to meet our quality objectives and the general requirements of the ISO9001 standard. Changes occur every business day, which can affect our quality system and products. It is management's responsibility to plan for these changes. Some types of change can include, but are not limited to:

- Functional Specifications

- New Equipment in Manufacturing

- Changes in Procedure and Regulations

Communicating the Quality Policy[7]

All ALBEDO staff have their responsibilities defined within the procedures that we have set forth and has been assigned with the authority to carry out those responsibilities. Each procedure within our quality system clearly shows how each function of our operation interfaces with each other.

The Managers and Directors are designated as the management representatives for their respective sites and areas of responsibility and are responsible for ensuring that the processes needed for the quality management system are established, implemented, and maintained in accordance with this manual.

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4.   Reference Procedure: PRC-SAT
5.   Reference Procedure: SGC-POL
6.   Reference Procedure: SGC-OBJ
7.   Reference Procedure: SGC-RRHH

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Internal Communication

Communication between personnel takes place on a regular basis in the form of informal meetings, management reviews and the company internet site. The management representative will also be responsible for checking the understanding of the Quality Management System and that it is communicated.

The Quality Policy shall be:

- Available and maintained as documented information
- Communicated, understood and applied within the organization
- Available to relevant interested parties, as appropriate

Management Review[8]

To measure the continued suitability and effectiveness of our quality system, it will be reviewed by management on a twice yearly schedule against a prior set agenda. Minutes from this meeting will be kept (see Paragraph)and any actions resulting from this will be carried out in accordance.

Review Input

The input to management review includes but not limited to information on:

- results of audits
- customer feedback[9]
- process performance and product conformity
- status of preventive and corrective actions
- follow-up actions from previous management reviews
- changes that could affect the quality management system
- recommendations for improvement

Review Output

The output includes any decisions and actions related to:

- improvement of the effectiveness of the quality management system and its processes
- improvement of the product related to customer requirements resource needs

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8.   Reference Procedure: INF-RVD
9.   Reference Procedure: PRC-SAT

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5.3 Organizational roles, Responsibility, Authority

Executive management has assigned responsibilities and authorities for all relevant roles in the company. These are communicated through the Organization Chart. The Direction Committee has appointed the Quality Assurance Manager with full responsibility and authority for all matters pertaining to quality and the Quality Management System, including:

- Conformance of this Quality Manual to its governing document

- Reporting performance of the Quality Management System and opportunities for improvement

- Ensuring promotion of Customer Focus throughout the organization

Interrelation Levels

ALBEDO Telecom defines the interrelation of staff at all levels through the use of lower tier Organization Charts. These charts are maintained by Human Resources and distributed to all department heads. Each department: Quality Assurance, Administration, Sales/Marketing, Operations, and Engineering are responsible for updating their department responsibilities, as the organizational structure of the company changes.

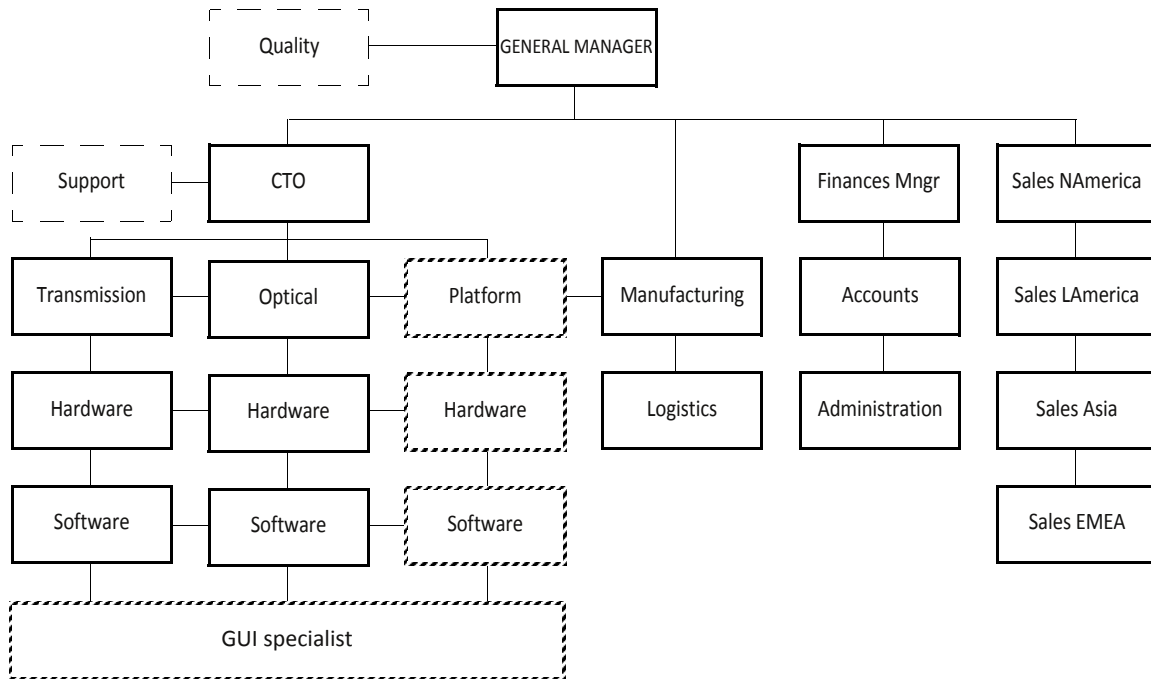**Figure 2**   *ALBEDO Organization Human resources / Organization*

ALBEDO communicates these responsibilities and authorities and their interrelation are defined and communicated at all levels per at least annually.

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6. PLANNING

ALBEDO Telecom considers risks and opportunities when taking actions within the Quality Management System, as well as when implementing or improving the system; likewise, these are considered relative to products and services.

Actions taken to address risks and opportunities shall be proportionate to the potential impact on the conformity of products and services.

6.1 Actions to address risks and opportunities

The Quality Management System of ALBEDO analyzes risks associated with programs and activities and looks for opportunities for improvement. The purpose is to:

- Give assurance that the Quality Management System can achieve its intended results.

- Enhance desirable effects.

- Prevent, or reduce, undesired effects.

- Achieve improvement.

New Products

An assessment is prepared of the impact new products, projects, or contracts will have with regards to the following resources:

- IT: determine the computer hardware, software, and applications.

- Documentation: Engineering specs, Technical Requirements, Manufacturing

- Standards, Specifications and other manufacturing documents.

- Equipment: servicing and inspection, measuring and test equipment.

- Human resources: ensure all staff has appropriate skills for each job/tasks.

- Parts: availability of raw materials, components, and manufacturing aids.

- Quality audits: planned audit(s) after activity completion.

Product Road Maps[10]

Each Department, Manufacturing and Support Organization with responsibility for defining product requirements documents new and changed product and process introduction requirements. Necessary to plan, control, approve, monitor and set standards so as to prevent problems which may arise during order processing, design, production, inspection and shipping. These processes will be scheduled, planned and carried out under controlled conditions.

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10. Reference Procedure: PRC-DES

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Consideration is given to activities from product design, development, incoming materials, manufacturing, shipping and warehousing, as appropriate, in meeting the specified requirements. The integration of material, processes and services which support the product will be identified during every single Purchase Order.

Determination of Requirements[11]

ALBEDO will determine the requirements needed to fulfill the customers order. These requirements will include:

- Delivery times

- Specifications/Documentation

- Regulatory and legal requirements are identified, such as traceable clauses

- Inspection method selection

- Sequence of operations

Defined design review process

Before planning and committing factory resources or the acceptance of an order from a customer, the appropriate Planning and Manufacturing organization reviews such orders to ensure that:

- The manufacturing order requirements are adequately defined, documented and agreed to internally before acceptance

- Product and customer requirements are met

- Differences between the manufacturing order requirements and the factory's capacity plan are resolved

- Manufacturing organization has the capacity to meet the manufacturing order requirements and risk analysis

These reviews are always performed and records of these reviews are maintained. Changes to the original customer order are reviewed in the same manner as the original review.

6.2 Quality Objectives

Design and Development Planning[12]

Each Department has developed a phase gate new product development and introduction process that describes:

- the different phase gate stages

- the activities associated with each stage

- the roles, responsibilities and authorities

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11. Reference Procedure: PRC-OPC
12. Reference Procedure: PRC-DES

The manager provides adequate resources for this activity. The plans are updated as product design evolves. A multidisciplinary approach is used during the product design and development activity including:

- the identification, finalization and monitoring of special characteristics
- the development of associated actions
- the development of control plans

6.3 Planning of Changes[13]

All design changes are identified, documented, reviewed and approved by authorized personnel before implementation

- Records of changes during the development process are maintained
- Engineering are responsible for monitoring and ensuring that the changes do not adversely affect product quality, performance, or reliability
- Review of the changes include evaluation of the effect of the changes on the components and product already delivered
- Customers are notified of design changes affecting the form, fit, or function of a product. In addition and where contracted or mandated by contract, customer approval of design changes is obtained

7. SUPPORT

In order to achieve quality objectives, ALBEDO management determines the capabilities necessary, human and physical resources, and needs to be obtained from external and internal providers. Specific resource requirements are analyzed and assigned during Management Reviews. Customer satisfaction is enhanced by meeting customer expectations.

7.1 Resources

Resources will be provided by ALBEDO to ensure that all processes are implemented and that any customer concerns are dealt with in a timely manner.

People[14]

All personnel will be trained, educated, or have experience, to ensure that they can fulfill their job responsibilities.

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13. Reference Procedure: PRC-DES
14. Reference Procedure: LST-RRH

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Competency and Training

We develop our most important resource; people, through training and reviews of their progress, and effectiveness of the training. Training will be carried out against identified requirements. Training will also be provided for the use, understanding and awareness of the quality system and the standards used at ALBEDO.

Employee empowerment

ALBEDO maintains a process to motivate employees to:

- achieve quality objectives
- make continual improvements
- create an environment to promote innovation
- This process includes the promotion of quality and technological innovation.

Infrastructure

ALBEDO's facilities are maintained and in perfect use. There is adequate workspace and equipment[15] to perform all processes within the quality system. This includes annual control of the inspection and calibration areas and the production areas[16].

Environment for Operation of Processes

The work environment will be climate controlled with air-conditioned, keeping humidity and temperature to a tolerable level between 21C to 25C. Each person is provided with a workspace, associated equipment, and furniture to be able to perform their tasks. The work environment will have good lighting and maintained clean at all times.

Socialization

ALBEDO promote socialization and a well accepted coffee break at 11:00 for casual talks and team games, such as *football-in,* during 30 minutes. Is the moment when and where all employees have the opportunity to talk with most of the managers and directors.

Monitoring and Measuring Resources

ALBEDO Telecom determines monitoring and measuring requirements that will ensure product and service conformity, and selects resources accordingly[17]. Moreover, the company verifies that this resource is properly maintained.

Measurement Traceability

Resources are labeled with calibration status and next calibration due date.

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15. Reference Procedure: PRC-RME
16. Reference Register: LST-INS
17. Reference Procedure: PRC-RME

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- Resources are calibrated or verified prior to use, and at scheduled intervals

- Resource is calibrated or verified in accordance with procedures

- Calibration records are maintained for all calibrations performed, which certify traceability

- When a resource is found out of calibration, the implications of previous inspections and tests are assessed and results recorded

- Proper resource storage and handling practices are observed, to ensure calibration maintenance

Quality Manual and calibration are performed under environmental conditions that are suitable to resources are utilized

Organizational Knowledge

ALBEDO Telecom shall determine the knowledge necessary for the operation of its processes and to achieve conformity of products and services. This knowledge shall be maintained and made available as necessary:

1. Knowledge may be obtained from internal sources, external feedback from subject matter experts, or intellectual property

2. External sources may be standards, academia, conferences, or information gathered from customers or suppliers

When addressing changing needs and trends, ALBEDO Telecom shall consider its current knowledge and determine how to acquire necessary additional knowledge and updates.

7.2 Competence

The methods for competency appraisal, quality awareness development, training provision, and evaluation are defined (Training Procedure OP-18). Records of employee education, skills, training, and experience are maintained.

7.3 Awareness

ALBEDO Telecom shall ensure that employees are aware of the Quality Policy, Quality Objectives, their contribution to the effectiveness of the Quality Management System (including benefits of improved performance), and implications of not conforming to the Quality Management System requirements.

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7.4 Communication

Effective and appropriate communications between functions and levels regarding QMS effectiveness are promoted by senior management. Communication may be initiated by any employee or external provider. Specific communications interfaces are defined within the company's Operating Procedures. Communication may include:

- Corrective or Preventive Action

- Meetings

- Internal audit results

- Data analysis

- Internal email

- Memos

8. OPERATION

8.1 Operational Planning and Control

Prior to the realization of product ALBEDO Telecom conducts planning to insure that the customer's requirements can be met prior to acceptance of the order (Process Control OP-9). Resulting Plans are consistent with the Quality Management System, and the organization's operating methods include:

- Product requirements and objectives

- Product specific processes, documentation, and resources

- Review and approval requirements, including product acceptance criteria

- Records requirements of process and product realization

ALBEDO Telecom shall control planned changes and review consequences of unintended changes, taking action to mitigate adverse effects, as necessary. Externally provided processes shall be controlled. Outputs shall be suitable to ALBEDO Telecom operations.

8.2 Products Requirements

Customer Communication[18]

Communication between ALBEDO and its customers is to ensure that any updates, amendments, additions, are handled effectively. This will include also any customer complaints, feedback and product requirements. Contractual amendments are also subject to contract review.

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18. Reference Procedure: PRC-RMA and PRC-SAT

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Design and Development Input

Each Department identifies, documents, and reviews product design input requirements for adequacy. Applicable statutory and regulatory requirements are included. Incomplete, ambiguous, or conflicting requirements are resolved with those responsible for imposing these requirements. Results of contract review activities are taken into consideration by the responsible design activity. Device and process simulation model robustness are validated periodically by the function responsible for maintaining the model.

8.3 Product Design and Development

Design and Development Planning

ALBEDO identifies documents and reviews product design input requirements including:

- customer requirements
- information gained from previous designs
- competitor analysis
- supplier feedback
- new industry standards

Design & Development Inputs

ALBEDO identifies, documents and reviews manufacturing process design input requirements including:

- productivity targets, process capability and cost
- customer requirements
- experience from previous developments

Design and Development Output

The design outputs are documented in a form that enables the verification against the design and development inputs. Design outputs include:

- Meeting the design input requirements including customer requirements
- Provide appropriate information required for manufacturing of the product
- Reference or contain product acceptance criteria
- Conform to documented industry, safety and regulatory requirements:
  (a) Identify the characteristics of the product that are essential to the safe and proper use and handling of the product. (b) Identify appropriate manufacturing testing requirements. (c) Provide a method for recording manufacturing test results.
- Pre-launch control plans

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Figure 3   *ALBEDO Product Design*

- Reliability results

Design & Development Changes

Each Department documents product design output and expresses the output in terms that can be verified and validated against design input requirements. Design output documents are reviewed by the appropriate cross-functional team before release. Each Department produces data demonstrating that each product has been characterized to the corners of the process or per customer requirements/applications.

Design & Development Outputs

Manufacturing process design output includes:

- specifications and drawings
- process flowcharts and layout
- process control plans
- work instructions
- process acceptance criteria

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Figure 4   *ALBEDO Net.Time GM*

- quality and reliability data

- results of error proofing activities

- rapid detection and feedback methods of process non-conformities

Design and Development Controls

Verification is confirmed through the provision of objective evidence of the following: Comparison of designed product to the product input requirements as defined by Evaluation of product against similar designs or against competitors products:

(a)   Testing to ensure compliance with product input requirements as defined in PRC-DES. These tests consider electrical and environmental stresses at least as severe as the design objectives.

(b)   Full review of documentation with respect to product input requirements and to any verification test results prior to issue.

Design and Development Validation

Validation is confirmed through the provision of objective evidence:

- The requirements for a specific application have been fulfilled

- Validation is completed prior to the implementation of the product

- Maintain records of the results of validation or other necessary actions

- Engineering prototypes are subject to the validation

- Validation of manufacturing process

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8.4 Control of Externally Provided Processes

ALBEDO Telecom ensures that all externally provided processes, products, or services, if required, conform to specified requirements[19]. Moreover, that external provider's services and subcontractors are controlled, dependent upon the effect that the services may have on the subsequent service delivered to the customer.

External provision of processes, products, and services, if applicable, is defined. External Provider records are maintained. The selection criteria and evaluation of external providers, if applicable, is define**.** Records of evaluation, performance, and corrective actions are maintained.

Type and Extent of Control

Prior to use or delivery to the customer, ALBEDO Telecom verifies that all products or services, if applicable, meet specified requirements. Externally provided processes shall remain under the control of this Quality Management System and are subject to verification [20].

Information For External Providers

Prior to transmittal, ALBEDO Telecom ensures that all Purchases clearly specify requirements:

1. Approval at the subcontractor's facility prior service realization or delivery

2. Applicable specifications, standards, or quality requirements

3. Personnel qualifications

4. External providers' interactions

5. Control and monitoring of External Providers' performance

6. On site activities

Purchasing Process[21]

To ensure that ALBEDO receives supplied products and services to our specified and implied needs, a list of approved suppliers will be maintained and will also show the scope of each supplier/subcontractors approval. Our purchases will also take into account physical condition of material/service cost, availability and traceability. The purchasing system and the selection of suppliers will be reviewed to ensure its continued suitability and follow up action taken on vendor problems. Any subcontractors used and the quality of the work that they provide will be the responsibility of ALBEDO. All suppliers and subcontractors will be evaluated to ensure:

• They use customer approved sources for any special processes

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19. Reference Procedure: PRC-SSE
20. Reference Procedure: PRC-SSE
21. Reference Procedure: PRC-PRO

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- Those that fail to meet out requirements are disapproved as required by the Quality Manager

These reviews will be used to determine the controls required in place for each supplier/subcontractor.

Purchasing Information

All purchase documentation used will clearly describe the material/service ordered, including where applicable:

- Quantities, condition, traceability, part numbers, type or other precise identification

- Inspection requirements which will be reported on a certificate of conformity where required. Also any standards/codes which may be referenced

- Any quality system standard to be applied to the product

- Any design, test, examination, inspection or customer acceptance requirement and its related instructions

- The right of access by ALBEDO and our customers and regulatory authorities to all facilities involved in the order and also access to all applicable records

- Any requirements for test specimens

- Any requirements to notify ALBEDO of any anomalies, changes in definition or approval for the process being used

- Any requirements which require to be followed down to sub tier suppliers will be identified on the Purchase Order

- All purchase documents will be reviewed for adequacy prior to issue

Verification of Purchased Products[22]

All products received at ALBEDO will be verified in accordance with inspection procedures and may also include:

- Records to support the quality of the product from the supplier

- Inspection or auditing the supplier

7. Asking the supplier/subcontractor to complete inspection and certification.

8.5 **Production**

Control of Production [23]

The production at ALBEDO are controlled to ensure:

- Technical data is available to verify the parts being manufactured

- Procedures have been documented for all processes

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22. Reference Procedure: PRC-SSE
23. Reference Procedure: PRC-PRO

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Figure 5   *ALBEDO Ether.Genius*

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- Measuring instruments are used as required to verify product

- Monitoring of manufacturing processes

- Key points identified by the design are monitored

- Jobs are completed using attached documentation

The change of the documentation shall also be reviewed by the Quality Manager to ensure no adverse impact.

9. PERFORMANCE EVALUATION[24]

9.1 Monitoring, Measurement, Analysis and Evaluation

ALBEDO will validate any processes for production, this includes processes where deficiencies become apparent only after the product has been in use, it includes:

- Criteria for review and approval

- Approval of equipment and qualification of personnel

- Requirement for records and documentation

Monitoring Customer Satisfaction[25]

The Customer Survey will be used regularly to monitor customer feedback for positive and negative information. This information will be reviewed as part of the Management Review and corrective action system to implement continuous improvement.

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24. Reference Procedure: PRC-NNC
25. Reference Procedure: PRC-SAT and INF-SAT

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Servicing and maintenance

Service and maintenance contracts are offered to all customers, and these activities are controlled in the same manner as Process Control.

Traceability

Industrial Dept directly responsible for manufacturing:

- Identify product by suitable means from receipt and during all stages of production and delivery

- Including traceability information (e.g. raw material, tool, shift, process)

- establishes and maintains documented procedures for unique identification of individual product or batches and maintains identification records

Inspection and test[26]

Department of manufacturing maintains the identification and test status of product and material throughout the production as defined by procedures.

Test of product is identified by suitable means indicating the conformance or non conformance with regard to inspection and tests performed and are recorded as quality records for traceability purposes. Only product that have passed the required inspections are released for further processing.

Product handling

Responsible for product handling establish and maintain documented procedures for handling, storage, packaging, preservation, and delivery of product or material.

Stock & Inventory[27]

Appropriate storage methods and designated areas or stock rooms are used to prevent damage or deterioration of product or material, pending use or delivery. The condition of product in stock is assessed at a predefined frequency. To optimize stock rotation, ALBEDO applies first-in-first-out inventory management system.

Appropriate methods for authorizing receipt to, and dispatch from such areas are specified. The condition of product or material in stock is assessed at appropriate intervals to detect deterioration.

Handling, Packaging and Labeling[28]

Methods of handling product or material prevent damage or deterioration, Proper Electrostatic Discharge (ESD) control are established and maintained.

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26. Reference Procedure: PRC-PRO
27. Reference Procedure: PRC-SSE
28. Reference Procedure: PRC-RME

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Packing and labeling processes are controlled to the extent necessary to ensure conformance to ALBEDO requirements[29]. This requirement applies to transfers between ALBEDO and its subcontractors.

Transportation packaging meets ESD requirements, makes appropriate use of dry pack / desiccant and prevents product physical damage.

Control of Test instruments[30]

The measuring and test equipment which could affect the quality of the finished products will be calibrated by an external subcontractor. ALBEDO will also ensure that instruments are:

- Calibrated or verified at specified intervals against measurement standards
- Traceable to national measurement standards
- Identification in order to determine the calibration status
- Protected from damage during handling and storage
- Records of equipment, identification number, location, checking frequency and method, tolerances and what to do when equipment is out of specs
- Our equipment will be in a known state of calibration
- Records of calibration will be maintained

A list of all equipment shall be maintained within the computer system. Any calibration result that indicates that product may be non conforming will require that the Quality Control investigate the inspection/test and determine if it needs to be repeated. Gauges are recorded in the computer and will be recalled by the Quality Manager within a month of the due date.

9.2 Internal Auditing

Audits will be carried out against procedures in order to verify the effectiveness of our quality system ALBEDO has documented procedures to ensure:

- The schedule has also been set based on importance of areas to be audited
- Follow up action and the results of these audits
- Records will be maintained of the audits

Audits will assess ALBEDO compliance to procedures and the ISO 9001

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29. Reference Procedure: PRC-OPC
30. Reference Procedure: PRC-RME

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Components and Product Inspection[31]

All materials received, in production, inspected/tested, stored, packaged and shipped from ALBEDO will be inspected to procedures and a record of the results will be kept. Products will not be processed in the system until all inspections have been completed unless the customer approves otherwise.

If certificates of conformance/analysis are supplied for raw materials and are to be used by ALBEDO as acceptance of the parts, materials or service then these certificates are to be inspected to the specifications required by the purchase order and kept.

9.3 Management Review

Management Reviews of the QMS are conducted annually to ensure continued system adequacy and effectiveness in achieving quality objectives. Reviews are planned by the Quality Assurance Manager, and attended by Senior Managers, and other relevant management or staff members.

Management Review Inputs

All aspects listed below are addressed during each annual Management Review cycle, in order to accurately assess current system performance and encourage improvement opportunities:

- Internal Audit results

- Customer feedback (including complaints)

- Achievement of Quality Objectives

- Process performance, product conformity results and review of measurement requirements

- Corrective and Preventive Actions

- Action Item results (from previous Management Reviews)

- Changing business and operational conditions that may affect the QMS

- Review of objectives and improvement recommendations

- Adequacy of Resources

- Effectiveness of actions taken to address risks and opportunities

- External Provide performance results

Management Review Outputs

Management Review minutes are recorded and made available to all attendees and other affected parties. In addition to documenting clearly indicate Action Items assigned, including:

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31. Reference Procedure: INS-001

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- QMS improvement measures and effectiveness
- Process and service improvement measures
- Resource requirements to achieve improvement

10. IMPROVEMENT

10.1 Applicable Requirement[32]

Each Department will plan and implement the measurement, monitoring, analysis and improvement activities used to assure conformance to product and customer requirements and continual improvement of the quality management system. Measurement, monitoring, analysis and improvement activities are supported by the best available methodologies for data recording and statistical analysis and fact based decision-making and communication technique:

- Identification of authorized persons
- Training and qualification requirements

Inspection documentation shall be maintained as evidence of product and process conformance, these records shall show:

- Acceptance and rejection criteria or reference to them
- The sequence of operations

10.2 Nonconformity and Corrective Actions[33]

The identification of non-conformance's and prevent them from being sent to the customer, ALBEDO has implemented a system procedure to:

- Detect nonconforming products and components
- Review the problem to determine what to do with the goods
- When this has been decided the persons concerned will be notified

Goods which are non-conforming will be reviewed, categorized and documented and action taken. If a customer needs to return items then a number will be issued to track the operations to follow.

- The cause of the non conformance is investigated and documented
- An action will be taken and documented to prevent its repetition
- Follow-up on the effectiveness of the action taken will be complete as part of the next internal audit

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32. Reference Procedure: PRC-CMP
33. Reference Procedure: REG-NCR

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Analysis of Data[34]

ALBEDO shall determine, collect and analyzes appropriate data to demonstrate suitability and effectiveness of the quality management system, and to evaluate where continual improvement of the quality management system can be made. This process will be within management's responsibility. Such data may include, but not limited to:

- Customer satisfaction

- Conformance to product requirements

- Characteristics, trends and opportunities

- Suppliers

10.3 Continual Improvement[35]

Statement

ALBEDO will continually improve the effectiveness of the quality management system though the quality policy, quality objectives, audit results, analysis of data, corrective and preventative action, and management review.

Corrective Action[36]

The Quality Manager and the involved Dpts. will take the appropriate actions to eliminate the cause of non conformities in order to prevent re-occurrence. Corrective actions are appropriate to the effects of the nonconformity encountered. The process requirements will include:

- Reviewing non conformities

- Determining the cause of non conformities

- Actions to ensure that non conformance do not recur

- Determining and implementing action needed

- Records of the results of action taken

Preventive Actions

ALBEDO will identify areas of potential improvement and actions to be taken to prevent non conformance. This will be done as part of our internal audit and management review process.

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34. Reference Procedure: SGC-KPI
35. Reference Procedure: PRC-NCC
36. Reference Procedure: SGC-ACC

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ALBEDO Telecom delivers solutions that enable Telecom infrastructures of all sizes to troubleshoot, monitor, and migrate mission critical networks.

From the desktop to the data centre, from Access Network, Ethernet, Sync-E, PTP, Optical backbones, LTE, VoIP or IPTV applications.

On local segments and across distributed networks, ALBEDO enable Telecom Organizations, Telecom Installers, Network Operators, Internet Service Providers and Contents Suppliers to quickly check the health of your network, verify SLA, or find and fix problems.

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