SECURITY SOLUTIONS

TERRITORIES

TONALI
Security First

SECURITY SOLUTIONS

Worldwide continuously increasing terrorism and criminal events have greatly highlighted the security prevention role for safeguarding goods and people.
Over the years, TONALI have been focusing more and more on design and development of:

- dedicated solutions for people and vehicle access control
- buildings security control
- new technologies to improve territories security control

TONALI have focused their attention on meeting the new security needs in environments like Airports, Harbours, Train Stations, Hospitals, Banks, Ministries, Prisons, Stadiums, Power Plants, Civil Protection, Territories.

Realizing that customer satisfaction is the goal for every project, TONALI pay particular attention to supporting their clients.
After-sales attention and services are provided on both the domestic and international markets. *A* fast and professional response time is a must for the best installation practice.

Reaching the best possible solution for the customer. Being there for all phases of the project – analysis, development, installation and after sales support –, is the TONALI key task.

CONTENTS

TERRITORIES SECURITY AND CONTROL | pg.7

HIGH STRATEGIC AREAS SUPERVISION AND CONTROL

GEOLOCATION, Wi-Fi COVERAGE, VoiP SYSTEMS | pg. 8
SUPERVISION AND CONTROL | pg. 9

HIGH TECHNOLOGY DEDICATED SHELTERS

TECHNOLOGICAL SHELTERS AND SOME APPLICATIONS : | pg.10
  ▪ FOR TELECOMMUNICATIONS | pg.11
  ▪ FOR ENVIRONMENTAL MONITORING | pg.13
  ▪ FOR EMERGENCIES IN CASE OF NATURAL DISASTERS | pg.15

FEW INSTALLATIONS OF OUR SECURITY SYSTEMS FOR TERRITORIES | pg.18

TERRITORIES SECURITY AND CONTROL

TONALI, in cooperation with its subsidiary WiSecurSAT, have worked for years on planning **solutions to improve the environmental security level.** Emergencies control through environmental monitoring and real time communication is possible thanks to hardware and software integration and development.


Our objectives are:

- Low environment impact mobile **protection**

- New **broadband telecommunication** systems integration and development to enable security and emergencies management for a widespread connectivity, **even where the environmental conditions do not allow** traditional wired systems

- **Time and way response optimization** in case of natural disaster or criminal events against public property, with improvement on safety

- Security systems that allow fast and accurate checks, paying particular attention to minimize both environmental impact and conditions.

Woods, forests, mountains, lakes, seas, ... work together for the Earth balance, protecting air purity and creating, with their range of shapes and colours, the beauty of our lands: a priceless treasure for our life quality.

GEOLOCATION, WI-FI COVERAGE, VOIP SYSTEMS

Images and data real time transmission, telemonitoring, telephony, encrypted data transmission with higher security margins than traditional ones, ... for airports, parks, companies, university campuses, metropolitan areas, exhibition centers, stadiums, libraries, etc.... **Through the proposed wireless broadband telecommunication system, real networks are quickly achieved, offering broadband connectivity to everyone everywhere within the covered area, without the limits of the traditional wired networks**, being expensive and with limited presence.

This technology is based on a standard broadband IP platform, that offers static IP addresses access with no wiring needs.

FROM HOT-SPOT TO **HOT-ZONE**

STEADY CONNECTIVITY WITHIN THE WHOLE COVERED AREA
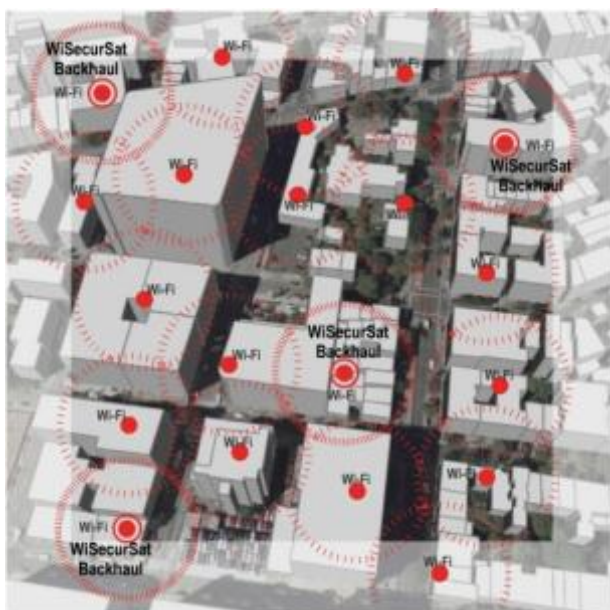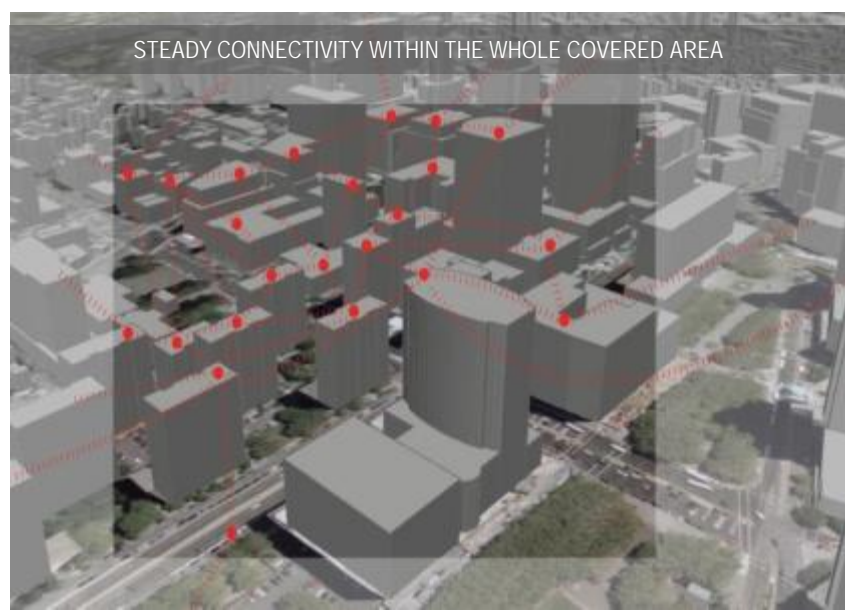
● Wi-Fi Hot-Spot

METROPOLITAN AREAS COVER WITH SEVERAL LINKED SERVICES (**MESSAGING PLATFORMS** – tablet, pc, … - **VOIP SERVICES**, **CCTV**)

Advantages :

- **the covering area extension** is realized **using cheap and widespread technologies**
- interconnectivity capacity improvement satisfies customers demand
- **it reduces risk investments**, thanks to the quick installation with a cover extension possibility without wiring infrastructures costs (**scalable solutions, low-cost, easy to install**)
- **it supplies service to remote areas**, where distances and territorial shapes are an obstacle to the extension of traditional wired networks
- **it allows a centralized system management**

SUPERVISION AND CONTROL

Oil fields, dams, storages, airport runways, photovoltaic fields, state boundaries,... are often subject to intrusion attempts. TONALI have the right solution to these issues with *Thermogard Plus*, the system which constantly monitors the access to sensitive areas with a thermal-cameras assisted video-analysis software, duly integrated by motion and tracking routines.


MOTION
AND TRACKING
DETECTION
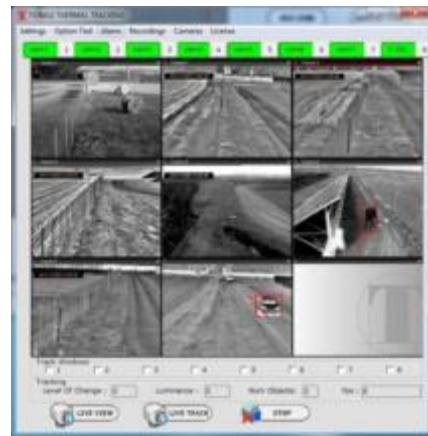
- **The system doesn't need artificial lighting**, with **energy and plants building costs savings**

- Continuous operation is granted **also in case of adverse weather conditions** (fog, snow, smoke, wind,...)

- **Remarkable false alarms reduction** compared to the traditional CCTV systems using standard cameras and Ir illuminators or infrared barriers or microwave devices and lighting and gsm systems, eventually with net anti-climbing system, etc.

- **User friendly procedures.** Security staff feels more comfortable and local interventions rate is dramatically reduced

- Investment, managing and service costs are reduced

- Alarms are handled by one system only

- Cameras are self-protected against tampering and thefts through a special steel shield

- Authorized movements within the protected area can be customised

TECHNOLOGICAL SHELTERS AND SOME APPLICATIONS

Technological shelters are designed to satisfy security needs and specific environments features where they will be placed.

They can support snow loads, high temperatures and/or other **climatic conditions** with **low thermal transmission resistance**. These shelters can be realized **suitable for vehicles and/or helicopters or fixed** (with **camouflage coatings** for a low environment impact), with **modular structure** to solve transport problems. They are **multi-technological products**, **compatible** with remote control stations and with all the Security Forces, self powered, with a **minimal maintenance needs**.

A detailed analysis of problems to answer and of territories features is the starting point. Only then, is possible to propose solutions that guarantees long life to installations and their re-adaptability to different future necessities.

CONTROL ROOM

SHELTER   SHELTER   SHELTER   DATA   VOICE   VIDEO   MONITOR
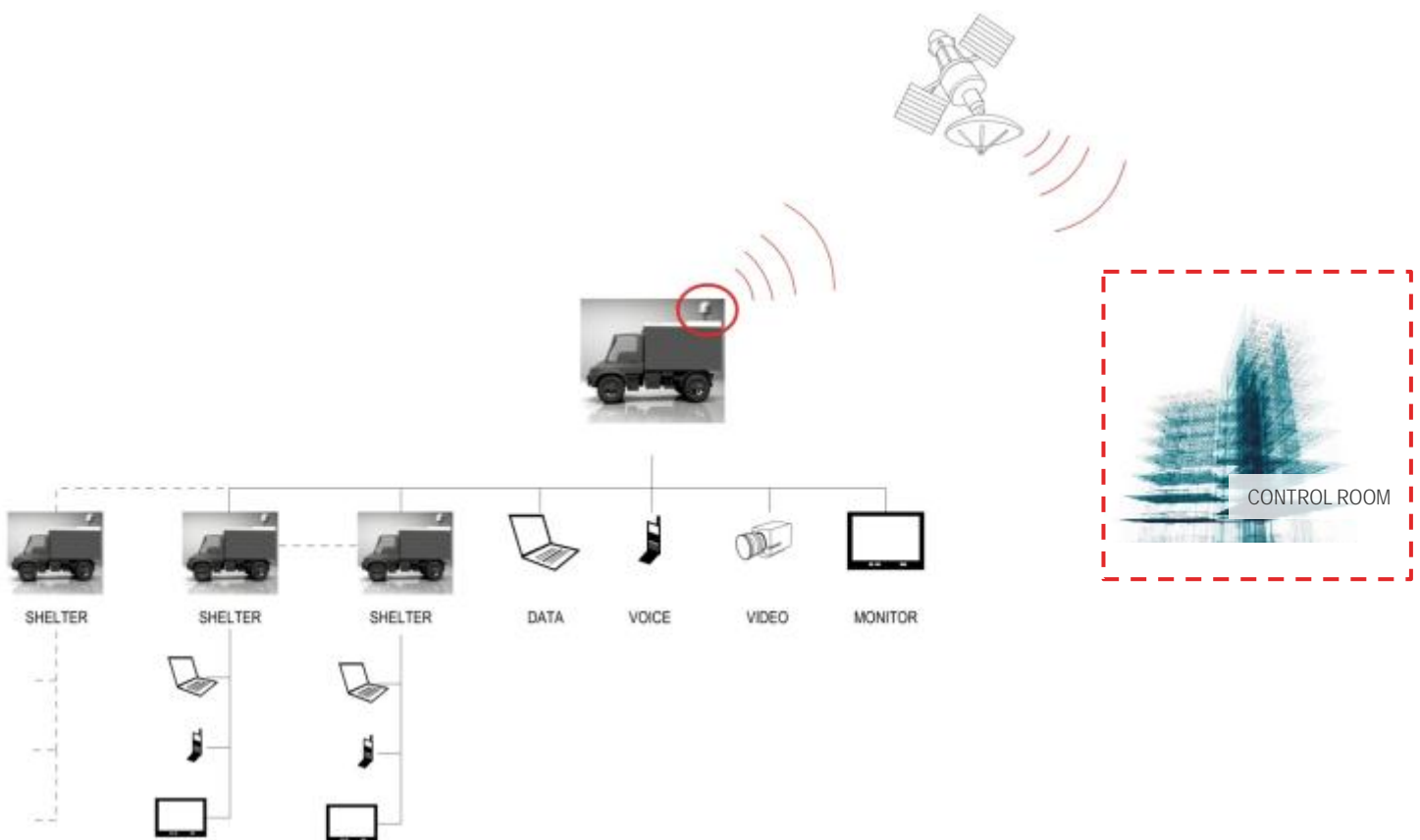
- Telecommunications
- Remote control
- Fire detection
- Main strategic areas and people crowd monitoring
- Security and prevention against vandalism and criminal events
- Weather stations
- To control environmental damage wreaked natural disasters or terroristic events (viability status, floodings, landslides, ...)

TONALI and WiSecurSAT gave an answer to these necessities, with ad hoc designed and realized **technological shelters, agreed with specific needs and current regulations** (UNI, ISO, CEI-EN, IEC).

■ FOR TELECOMMUNICATIONS

Everywhere real time communication and information: **up-to-date and effective networks and telecommunication services that override problems related to clear distances, geographical obstacles and acts of God** are today more essential than ever.

Where connections are really difficult good telecommunication network development is essential; it would be also essential in case of public building has to be temporary replaced.

TONALI suggest shelters as network nodes in a broadband transmission. Each shelter, or network node:

- ■ is a part of a strategically relevant transmission network,
- ■ holds equipment provided with self powered optical fiber
- ■ is designed to be adapted to territorial features (altitude, winds, snow loads, seismic zones, thermal shocks, appearance, ...)
- ■ can be realized in fixed, suitable for vehicle or helicopter versions.

These particular fixed shelters, meeting the specific features of customers and environment in which they are installed, **offer a telecommunication service where introduction of a traditional wiring is not technically or economically feasible**.

These suitable for vehicle or helicopter shelters can replace, in very short time, damaged fixed stations.

For mountain regions, for example, these shelters can be realized according to the needs with different features:

- high thermal insulation,
- high load capacity (snow loads),
- antennas pole,
- on-roof photovoltaic system
- …
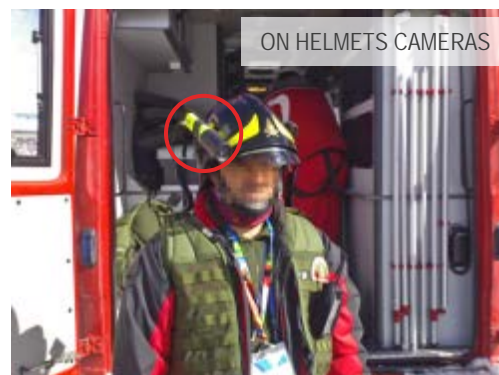

MOUNTAIN REGIONS DEDICATED SHELTERS

COMMUNICATION SERVICES SHELTER WHEN FIXED
STRUCTURES CANNOT BE USED

First operation mobile offices were designed to solve communication problems. In this way it is possible to provide services to local communities, also when fixed structures are not available due to reorganization or acts of God damages.

▪ FOR ENVIRONMENTAL MONITORING

Main task is to **monitor territories in defense from acts of God or criminal actions (fires, flooding, landslides, ...), performing prevention activities to limit these events.**
Control mobile stations, overseeing of emergency activities and mobile laboratories for samples and environmental analysis are main elements for territories control and security.

VEHICLES PROVIDED TO STATE FORESTRY CORPS

VEHICLES PROVIDED TO FIRE DEPARTMENT

ON HELMETS CAMERAS

In order to satisfy these needs, TONALI suggest shelters suitable to support technologies to:
- ▪ **remote detect and take over possible principles of fire and transmit via satellite related images to the control room**
- ▪ elaborate environmental information and transfer them to other related coordinating structures,
- ▪ **be able to mobile territory supervision** (public, environmental, food processing security, crime prevention, ...) – fixed, suitable for vehicles or helicopters shelters
- ▪ provide **mobile logistic support to dedicated staff involved in territorial surveillance** and to provide information support for citizens
- ▪ **allow test execution on field** if necessary to put up instant results to be sent to laboratories for more complex analysis.

Deigned and realized for Emergency Forces in three different configurations:

- **Shelter – Control Room**: its purpose is to spread Emergency coordination, overseeing and monitoring functions on the territory, in case of environmental emergencies with logistic and organizational support (flying squad coordination). Besides, it has to be a link for both local and central involved institutions with the ability to transmit, via satellite to the central control room, images and found data in case of principle of fire.
- **Shelter – Office**: to make services closer to isolated areas people
- **Shelter – Laboratory**: to perform on-field chemical, phisical and biological analysis (pollutant substances identification, environmental surveys, ...) and weather monitoring.

Each type of shelter is equipped with telecommunication devices (satellite, GSM, GPRS, UHF/VHF repeaters, TETRA, WiFi, ...) to connect vehicles, control rooms, aircrafts, ...

FOR EMERGENCIES IN CASE OF ACTS OF GOD

Technological shelters overseeing of emergency activities **to transmit on site information**. This is the need during, for instance, Fire Department, Civil Protection, … activities which attend in big events, demonstrations, acts of God, etc.

TONALI suggest **suitable for vehicles or helicopters mobile stations** for *Local Task Force* emergency with the following configuration:

- control room for *personal security* application, Tetra local communications and on-field staff location
- real time data transmission via WiMax
- broadband satellite transmission system realized with self-pointing satellite antenna and built-in modem

CIVIL PROTECTION VEHICLE FITTED IN SHELTER

Through the *personal security* application **is possible to transmit the field situation** to the vehicle control room (via WiMax) and to the remote control center (via satellite) **using staff-helmet installed cameras or fixed ones**.

The extensible antenna, placed in the middle of the roof, allow anyone in a radium of 3 kilometers to transmit or receive broadband images.

The realized shelter allows:

- optical presidium of emergency activities
- to play as a mobile control room
- to play as a control room with *personal security* applications and mobile control room with WiMax and satellite communication systems.

These kind of shelters can also be installed on off-road and amphibious vehicles with specific changes and approvals to be used in extreme environmental conditions.

FEW INSTALLATIONS OF OUR SECURITY SYSTEMS FOR TERRITORIES

- Airports: VoiP covering and integrated security systems

- Harbours: perimetral protections with thermal cameras, integrated security systems

- Photovoltaic Fields: perimetral protections with thermal cameras

- Province of Trento: mountain zones dedicated telecommunication shelters

- State Forestry Corp: mobile shelters for fire detection

- Civil Protection: mobile shelters for telecommunication in case of acts of God

- Fire Department: mobile shelters for emergency

TONALI S.p.A.