

## COMPANY PROFILE

**Trinity Systems** is an SME company specializing in Information & Communication Technologies. It aims at providing turn-key ICT solutions and system integration services to the enterprise sector, covering a wide range of activities such as radio-frequency identification systems (RFID), real-time locating systems (RTLS), short-range wireless sensor networks (WSN), wireless engineering, industrial & environmental telemetry systems etc. The company was established in 2006, it is privately-held (bootstrap-financed) and is located in Thessaloniki, Greece.

### *Expertise*

All company members are Electrical & Computer Engineers, graduates of the Aristotle University of Thessaloniki. Their individual technical and scientific skills, in addition to sole proprietorship experience, resulted in a highly-qualified research team working in close collaboration.

During their doctoral studies they refined both theoretical and applied background and gained valuable engineering skills. As members of the "*Telecommunications & Soft Computing Group*", they acquired expertise in the fields of wireless network engineering, antenna design and theoretical & applied signal processing. Their dissertations spread over a wide range of scientific areas including antennas & propagation, RF/microwave engineering, speech synthesis & recognition and signal processing.

In addition, they have participated in several research projects in the forefront of technology, funded by well-established enterprises in the ICT sector: OTE, Cosmote, Microsoft Hellas, Dienekis Information Systems. Indicative examples are the design of the cellular network that provided high-quality communications during the 2004 Olympic Games and the development of a text-to-speech system for assisting the visually impaired.

### *Field of Activities*

Based on the expertise acquired, the company offers a wide range of integrated solutions and services in the ICT sector. The main areas of corporate activity are outlined below:

#### *Telecommunication Solutions*

⊙ **RFID (Radio-Frequency Identification)**

Design, integration & field testing of RFID systems for retail, supply-chain management & logistics, waste management, asset tracking and other applications.

⊙ **Telemetry & Telematics**

Standalone telemetry systems for industrial & environmental applications, exploiting multi-scale network architectures.

✓ *Short Range*

Low-cost, flexible wireless sensor networks (WSN) based on leading technologies such as ZigBee & proprietary alternatives.

✓ *Large Scale*

Dedicated solutions employing data transmission over multiple communication interfaces (WLAN-WAN, GPRS-3G, Satellite).

- ⊙ **Wireless Network Engineering**  
Design & deployment of wireless networks including physical site survey, propagation study, coverage and traffic analysis, equipment assessment, field testing and performance evaluation.
- ⊙ **Antenna Design**  
Modeling & prototyping of various antenna types for custom wireless solutions, ranging from RFID to WiFi applications.
- ⊙ **Electronics Hardware Integration**  
Component integration (sensors, controllers, electronic gauging, measuring equipment) and operability enhancement (wireless connectivity, web interface) for custom industrial applications.

#### *Informatics Solutions*

- ⊙ **Web Design & Development**  
Corporate web design and promotion. Sophisticated approaches for highly-demanding applications requiring database interoperability and enhanced user interaction.
- ⊙ **Software**  
Software development, testing & code verification for custom applications on personal computers, embedded platforms and mobile devices.

#### *Research*

- ⊙ **Wireless Communications**
  - ✓ *Antennas & Propagation*  
Design, modeling and prototyping of wideband and multiband printed antennas / Microcellular propagation prediction modeling.
  - ✓ *RF & MW Engineering*  
Design & modeling of RF/microwave passive circuits & subsystems.
- ⊙ **Theoretical & Applied Signal Processing**
  - ✓ *Speech Processing*  
Digital signal processing and statistical analysis for speech synthesis & recognition.
  - ✓ *Image Processing*

#### *Consulting Services*

- ⊙ **Business Planning**  
Preparation & authoring of business plans.
- ⊙ **Feasibility Studies**  
Investigating the viability of technological and engineering projects.
- ⊙ **ICT Consulting**  
Consulting services on theoretical and practical issues regarding Information & Communication Technologies.
- ⊙ **Co-financed Development Programmes**  
Preparation & application of proposals for national and European collaborative projects.

### *Training & Education*

⊙ **Theoretical Seminars & Lectures**

Scientific supervision of dedicated courses on cutting-edge technologies, adapted to the specific needs of enterprises.

⊙ **ICT Equipment & Software Training**

Training of SME employees (engineers & technicians) on test & measurement instruments and software used in ICT applications.

For more information on the provided services and technical solutions, please visit our website <http://www.trinitysystems.gr>.

### *Vision*

The firm aims at addressing the technological challenges by providing innovative services and solutions that meet higher quality standards.

With a definite orientation towards market needs, and being aware of the research issues to be addressed, the main ambition is to offer reliable solutions to its partners and satisfy the scientific interests of its members.

In this context, it intends cooperation with entities and firms that share the same vision.

### *Awards*

⊙ **Innovative Ideas**

1<sup>st</sup> place award in the 2005 entrepreneurship competition "*Innovative Ideas*", organized by the Region of Central Macedonia, Greece, for the best business plan.

⊙ **Ericsson Award of Excellence in Telecommunications**

All founding members have independently received the "*Ericsson Award of Excellence in Telecommunications*", established by Ericsson Hellas SA.

## RTD Experience

No.	Research Programme Title	Funding Body
1	InfrArtSonic, INCO-CT-2005-015338: Development of a novel and integrated portable non-destructive analysis system for the documentation of artworks	European Commission (FP6)
2	AKMON, 05-AKMON-83: Development of a platform for the retrieval of multimedia and scientific information of artworks targeting to the creation of multimedia presentations for electronic publishing	General Secretariat of Research & Technology (GSRT)
3	Adaptation of automated Greek TTS system ESoPoS for the work environments of visually impaired people	Microsoft Hellas S.A.
4	Design and study of a DCS1800 mobile communications network in extreme traffic/load conditions for high-quality service reassurance during the Athens 2004 Olympic Games	Cosmote S.A.
5	Interoperability measurements of parallel antenna systems	Cosmote S.A.
6	Wireless access integration based on DECT technology on current and future OTE networks	OTE S.A.
7	Adaptation of a Greek Text-to-Speech system for automated IVR (interactive voice-response) applications: Phonetic Hermes	Dienekis S.A.
8	Electromagnetic radiation measurements	Telecom Laboratory, Dept. of Electrical Engineering, AUTH
9	Adaptation of the Greek TTS system for multimedia encyclopedia	Publishing Informatics Commercial Ltd
10	Research in sciences and technologies of language and communication	AXON S.A.
11	ESoPoS – Greek Text-to-Speech System	MLS Informatics S.A.

## Contact Information

For any technical or commercial enquiries, please don't hesitate to contact us !

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