



## **REGIONE BASILICATA**

**Overview of the involvement of local Research  
Organisations, Enterprises, Universities in  
national and international projects on Earth  
Observation applications and services.**

**( Earth Observation, Satellite Navigation and Telecommunication)**

**Digimat Srl**

## ORGANISATION PROFILE AND EXPERIENCE

### Section 1 - Contact details

<b>Organisation Name</b> (full name)	Digimat Srl	<b><u>Contact person:</u></b>	
<b>Organisation acronym</b> (Abbreviation)	DGM	<b>Title</b>	Ing.
<b>Address</b>	Via delle Officine, s.n.c.	<b>First Name</b>	Angelo Raffaele
<b>Postal code</b>	75100	<b>Family Name</b>	Donvito
<b>City</b>	Matera	<b>Telephone</b>	+393481331475
<b>Region</b>	Basilicata	<b>Fax</b>	+390835344059
<b>Country</b>	Italy	<b>Skype</b>	Linodo526
<b>www address</b>	<a href="http://www.digimat.it">www.digimat.it</a>	<b>E-mail</b>	<a href="mailto:Angelo.Donvito@Digimat.it">Angelo.Donvito@Digimat.it</a>

### Section 2 – Type of organisation

#### If you are an Enterprise

<b>Enterprise type</b>	<input checked="" type="checkbox"/> Private <input type="checkbox"/> Non profit	<b>Is your Company a Small-Medium sized Enterprise (SME)?</b>	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
	<input type="checkbox"/> Public <input type="checkbox"/> Other	<b>if YES, Number of Employees</b>	<input type="checkbox"/> < 10 <input checked="" type="checkbox"/> > 10 and < 50 <input type="checkbox"/> < 250
<p>According to Article 2 of the annex of Commission Recommendation 2003/361/EC of 6 May 2003, which applies from 01 January 2005, an SME (Micro, Small or Medium-sized Enterprise) is an enterprise which:</p> <ul style="list-style-type: none"> <li>• has fewer than 250 employees,</li> <li>• has an annual turnover not exceeding 50 million euro, and/or</li> <li>• an annual balance-sheet total not exceeding 43 million euro.</li> </ul>			
<b>Owned by a non SME:</b>		<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	

**Description of the organisation (max 1.000 characters):**

**Digimat** established in Matera, Italy, in October 2001 a group of Specialists coming from important companies in the IT and healthcare sector.

Digimat is organized in Functional Areas:

- Operations (AO)
- Administration, Finance & Auditing (AFC)
- Commercial (COM)
- Personal & Human Resources (PO)

The Operations area, which comprises the productive component of the company, is structured into Business Units. Each Business Unit consists of a single entity focused on a specific sector or application area and has relative technical and organizational autonomy. The current Business Units are:

- Space and Defence Systems (EO)
- Healthcare Systems (HS)
- Geographic Information Systems (GIS)
- WEB systems

**Spheres of Competence**Space

- Design and development of single components for the ground segments of space missions
- Design and development of “ data processors”: software components to either process remotely sensed data associated to various kinds of sensors (SAR, optical, etc.) and space missions or to perform complex post-processing (i.e.: geocoding, data mosaicking, etc.)

Healthcare

- Design and development system for management of the patients clinicians data
- Design and development system for management of dental ambulatories
- Design and development system for the study of the epidemiologic phenomena

GIS

- Design and development of interoperable SDI compliant to ISO 1915 and OGC specifications.
- Design and development of a SDI compliant to INSPIRE recommendations.

**Staff information**

Actual Staff profiles involved in Earth Observation activities (e.g. engineers, physicists, computer scientists, mathematicians, administrative, etc.):

- Engineers
- computer scientists
- administrative
- statisticians

**If you are a Research Organisation**

<b>Research Organisation type</b>	Research Organisation ( <input type="checkbox"/> Private <input type="checkbox"/> Public) High Education School / University / Institute ( <input type="checkbox"/> Private <input type="checkbox"/> Public) <input type="checkbox"/> Other, please specify:
<b>Description of the organisation (max 1.000 characters):</b>	
<b>Staff information</b>	

**Section 3 - Description of your main expertise and activities in the field of Earth Observation Technologies**

<b>Areas of expertise</b> (max 2.000 characters)	<b>Space Sector</b> <ul style="list-style-type: none"> <li>• Design and development of single components for the ground segments of space missions</li> <li>• Design and development of “ data processors”: software components to either process remotely sensed data associated to various kinds of sensors (SAR, optical, etc.) and space missions or to perform complex post-processing (i.e.: geocoding, data mosaicking, etc.)</li> <li>• Design and development of CALVAL tools.</li> <li>• Design and development of tool for photo interpretation and object classification.</li> </ul>
<b>Keywords describing the activities performed by the organisation</b> (if needed more than one)	1. <b>Earth Observation</b> 2. <b>SAR Processors</b> 3. <b>Signal Data Processing</b> 4. <b>System Engineering</b>

## Section 4 – List of Projects implemented in the last 5 years

<b>Project</b>	<b>COSMO-SkyMed</b>
<b>Title</b>	<b>Support to Design, Development and AIV of User Ground Segment of COSMO-SkyMed Mission</b>
<b>Project Acronym</b>	<b>CSK</b>
<b>Source of funding / Programme</b>	National funding (ASI)
<b>Status</b>	Completed
<b>Role of the organisation</b>	Partner
<b>Responsible</b>	ThalesAlenia Spazio/Telespazio
<b>Duration</b>	From (10/2001) to (02/2010)
<b>Content</b>	<p>The constellation consists of 4 medium-size satellites, each one equipped with a microwave high-resolution synthetic aperture radar (SAR) operating in X-band, having ~600 km single side access ground area, orbiting in a sun-synchronous orbit at ~620km height over the Earth surface. The Ground Segment is responsible for managing the constellation and granting ad-hoc services for collection, archiving and delivery of products to the users.</p> <p>The System will deliver information based upon the following fundamental characteristics of the SAR Payload operational modes.</p> <p>Digimat has been involved, with various roles and responsibilities, in the COSMO-SKYMED Program.</p> <ul style="list-style-type: none"> <li>• COSMO-SkyMed processors</li> <li>• Design &amp; Development of three different prototypes of SCANSAR processor (Time Domain, Range-Doppler Modified and SPECAN).</li> <li>• Design &amp; Development of software component for the SPPI project (multimission G/S).</li> <li>• COSMO-SkyMed UGS (User Ground Segment)</li> <li>• Support to GS (Ground Segment) components interface definition and related ICD (Interface Control Document) drawing up.</li> <li>• Design &amp; Development of software components of M&amp;C in UGS.</li> <li>• Participation to the definition of the SCANSAR algorithms</li> </ul>
<b>Website</b>	<a href="http://www.cosmo-skymed.it">http://www.cosmo-skymed.it</a>

<b>Project</b>	<b>KOMPSAT 5</b>
<b>Title</b>	<b>CalVal and Geocoding</b>
<b>Project Acronym</b>	<b>KMP5</b>
<b>Source of funding / Programme</b>	Korean National funding (Korean Space Agency)
<b>Status</b>	Completed
<b>Role of the organisation</b>	Partner
<b>Responsible</b>	ThalesAlenia Spazio
<b>Duration</b>	From (10/2006) to (02/2009)
<b>Content</b>	<p>KOMPSAT5 is the Korean earth observation programme</p> <p>Digimat has been involved, with various roles and responsibilities, in the Program.</p> <ul style="list-style-type: none"> <li>• Digimat prototyped (under MATLAB environment) and developed geocoding processors facility (level1C and 1D) for all operative modes (standard, scansar, spotlight), in the ambit of KOMPSAT mission (South Korean space mission). Level 1C processor performs cartographic projection (UTM/UPS) of SAR L1A/B data on ellipsoid. Level 1D performs: backscattering evaluation of input data; cartographic projection of backscattered image on DEM; generation of GIM layer (it is a dataset coregistered with output image, in cartographic projection, containing values of incidence angle and shadow/layover flag for each pixel of output image); tiepointing of image using a set of ground control points supplied as input to facility.</li> <li>• Development of CALVAL (CALibration and VALidation) processors</li> </ul>
<b>Website</b>	<a href="http://www.cosmo-skymed.it">http://www.cosmo-skymed.it</a>

<b>Project</b>	<b>TeRN 1</b>
<b>Title</b>	<b>Interoperable System for environmental monitoring</b>
<b>Project Acronym</b>	<b>TeRN1</b>
<b>Source of funding / Programme</b>	National Funds (Research Ministry)
<b>Status</b>	Completed
<b>Role of the organisation</b>	Partner
<b>Responsible</b>	TeRN Consortium
<b>Duration</b>	From (06/2007) to (12/2008)
<b>Content</b>	<p>Digimat has been involved in the TeRN1 project "Tecnologie per le Osservazioni della Terra e i Rischi Naturali", project funded (DD n.1590 27/07/2006) by the Italian Research and University Ministry - Art. 13 of the D.M. 593 /2000 – TeRN is the coordinator."</p> <p>The task of TeRN1 project, in charge to Digimat, aims to develop an interoperable platform oriented to support services in the field of environment monitoring and risk mitigation. The platform has been developed adopting an SDI infrastructure based on Deegree platform. It has been used to archive geo-referred products and map generated as output of the TeRN project.</p>
<b>Website</b>	

<b>Project</b>	<b>COSMO-SkyMed Order Desk</b>
<b>Title</b>	<b>Order Desk for ordering COSMO-SkyMed Products</b>
<b>Project Acronym</b>	<b>CSK Order Desk</b>
<b>Source of funding / Programme</b>	Private founds
<b>Status</b>	On going
<b>Role of the organisation</b>	Subcontrcator
<b>Responsible</b>	e-geos
<b>Duration</b>	From (04/2009)
<b>Content</b>	<p>Digimat has been involved in the design and development of order desk of COSMO-SkyMed. This system is a web application to manage the product orders from P.I. (Scientific Users) and commercial users.</p> <p>The system is interoperable with COSMO-SkyMed UGS in order to submit orders to CSK Order Manager.</p>
<b>Website</b>	