



EUROPEAN  
COMMISSION

Community Research



## **Robot Fleets for Highly Effective Agriculture and Forestry Management**

**NMP2-LA-2010-245986**

### **Agenda of the Scientific and Technical Meeting (Arnsberg-Neheim)**

August 26-27, 2013

Arnsberg-Neheim, Germany

**AirRobot  
(AR)**

<i>Deliverable Identifier:</i>	--
<i>Work-package, Task:</i>	--
<i>Work Package leader</i>	--
<i>Deliverable type*</i>	O
<i>Dissemination level**</i>	PU
<i>Status -Version</i>	FINAL
<i>Contractual delivery date:</i>	August 12, 2013
<i>Actual delivery date</i>	August 21, 2013
<i>Author:</i>	P. Gonzalez-de-Santos

\*PU – Public, PP – Restricted to other programme participants (including the Commission Services), RE – Restricted to a group specified by the consortium (including the Commission Services), CO – Confidential, only for members of the consortium (including the Commission Services).

\*\*R – Report, P – Prototype, D – Demonstrator, O – Other.



UNIVERSITÀ  
DEGLI STUDI  
FIRENZE  
DEPARTMENT OF  
AGRICULTURAL, FOOD AND  
FORESTRY SYSTEMS



**BLUEBOTICS**  
Mobile Robots at your Service



C.M. srl

[This page intentionally left blank]

**Monday, August 26, 2013**

**Meeting point:**

08:40 a.m. at the IBIS hotel  
Möhnestr. 35/37  
59755 - Arnsberg - Neheim

**Meeting place:**

Arena Restaurant  
Mendener Str. 18  
59755 - Arnsberg - Neheim

**WELCOME AND MEETING OBJECTIVES**

09:00-09:10	Welcome by the host (AR)	Burkhard Wiggerich (AR)
09:10-09:15	Meeting objectives	Pablo Gonzalez-de-Santos (CSIC-CAR)

**SCIENTIFIC AND TECHNICAL MEETING**

	<i>The aim is to review the work done and organize the work for the next period. Emphasis is expected in:</i>	
	<ol style="list-style-type: none"> <li>1. Status of subsystems finishing in Month 36 (July 2013) and actions</li> <li>2. Status of deliverables to be delivered in month 36 and actions</li> <li>3. Further integration plan, if needed.</li> </ol>	
<b>09:15-10:15 (60 m)</b>	<b>WP2: Mission Manager and WP7: Base station and graphical user interface</b>	<b>Angela Ribeiro (CSIC-CAR) Stefania Pedrazzi (Cyberbotics)</b>
<b>10:15-11:15 (60 m)</b>	<b>WP3: Perception System</b>	<b>Gilles Rabatel (Irstea)</b>
(10 m)	Camera devices, Vis-Nir registration and mosaiking	Gilles Rabatel
(10 m)	Multi-temporal experiments on wheat and maize for mapping crop - rows and weeds	Jose Manuel Peña (CSIC-IAS)
(10 m)	Weed detection on ground units	Maria Guijarro (UCM)
(10 m)	Obstacle detection by vision	Michael Brandstoetter (CV)
(10 m)	Structure detection by kinect and Lidar	Miguel Garrido (UPM-EIA)
<b>11:15-11:30</b>	<b>Coffee break</b>	
<b>11:30-12:30 (60 m)</b>	<b>WP4: Actuation System</b>	<b>Andrea Peruzzi (U. Pisa)</b>
	Short introduction	Andrea Peruzzi (UP)
(12 mins)	HLDMS and positioning systems	Pablo Gonzales-de-Santos (CSIC-CAR)
(11 mins)	LLAS and GMU controller	Patrick Balmer (BL)
(11 mins)	End effectors for treatment application in tree crops (Olive)	Marco Vieri (UF)
(11 mins)	End effectors for treatment application in narrow rows herbaceous crops (winter cereals)	Manuel Pérez Ruiz (SAP)
(15 mins)	Tools for mechanical and thermal treatments in wide row crops (maize) and conclusions	Andrea Peruzzi (UP)
<b>12:30-14:00</b>	<b>Lunch</b>	
<b>14:00-15:00 (60 m)</b>	<b>WP5: Mobile Units</b>	<b>Benoit Debilde (CNH)</b>
14:00-14:50 (50 m)		
(10m)	Ground Mobile Unit	Benoit Debilde (CNH)
(5m)	Ground Mobile Unit Controller	Patrick Balmer (BL)
(10m)	Safety system of the Mobile Units (Laser)	Miguel Garrido (UPM-EIA)
(5m)	Safety system of the Mobile Units (Camera)	Michael Brandstoetter (CV)
(5m)	PEM Fuel cell	George Kaplanis (TRO)
(10m)	Aerial Mobile Unit	Burkhard Wiggerich (AR)
(5m)	Aerial Mobile Unit Controller	David Sanz (UPM-EII)

15:00-15:45 (45 m)	<b>WP6: Communication and Location System</b>	<b>Slobodanka Tomic (FTW)</b>
15:45-16:00	<b>Coffee break</b>	
16:00-16:30 (30 m)	<b>WP8: System integration, final demonstration and project assessment</b>	<b>P. Gonzalez-de-Santos (CSIC-CAR)</b>
16:30-16:45 (15 m)	<b>WP9: Dissemination, exploitation and training</b>	<b>Manuel Perez-Ruiz (SAP)</b>

<b>GENERAL ASSEMBLY</b>		
16:45–17:15	<ul style="list-style-type: none"> <li>• <b>Passing Milestone 3 - System prototypes</b> <i>(The prototypes of the subsystems are finished and operative)</i></li> <li>• <b>Organising the amendment</b></li> </ul>	Beneficiary representatives

<b>SOCIAL EVENT AND DINNER</b>		
18:00–19:00	Bus (sightseeing) tour from the ibis Hotel to the Möhnesee (dam)	AR
19:00–21:00	Guided tour through Arnsberg	AR
21:00-	Dinner at BOJCUM Distillate manufactory	AR

**Tuesday, August 27, 2013**

**Meeting point:**

08:40 a.m. at the IBIS hotel  
Möhnestr. 35/37  
59755 - Arnsberg - Neheim

**Meeting place:**

Arena Restaurant  
Mendener Str. 18  
59755 - Arnsberg - Neheim

**SCIENTIFIC AND TECHNICAL MEETING**

<b>09:00-09:25</b>	<b>Review to the work plan</b>	<b>P. Gonzalez-de-Santos (CSIC-CAR)</b>
<b>09:25-09:30</b>	<b>Organization of next meeting</b>	<b>(BlueBotics)</b>
<b>09:30-10:15</b>	<b>Introduction to the patent application process, EU framework and possible collaborations</b>	<b>Dirk Ameye (CNH patent office)</b>

**WORKING GROUPS**

<b>10:15-11:00</b>	<ul style="list-style-type: none"> <li>- This is the time for making working groups to answer technical questions and solving technical problems not addressed in the WP sessions. The organizer has to report the Project Coordinator about discussions and agreements in order to include them in the minutes of the meeting</li> <li>- Partners interested in applying for patents have the possibility to discuss with the representative of CNH patent office</li> </ul>
<b>11:00-11:30</b>	<b>Coffee break</b>
<b>11:30-12:15</b>	Working groups cont'

**VISIT TO AIRROBOT FACILITIES**

<b>12:15-13:00</b>	Walk from the meeting place Kaiserhaus to the AirRobot facilities: A short tour though the Production Area
<b>13:30-15:00</b>	Lunch at AirRobot (catering)
<b>15:00-</b>	End of meeting