

EUDEM Research Survey

EUDEM2 Questionnaire2

(Research Centers/University Labs/Governments (R&D))

Interviewer: Claudio Bruschini

PART I: Relationship with military/humanitarian demining. Problem knowledge.		DATE: 27/10/2003
Organization (name + web address) PMAR Lab-DIMEC-University of Genova, Italy http://www.dimec.unige.it/PMAR		
Contact Person (name + e-mail): Emanuela Cepolina ecapolina@dimec.unige.it		
Level of knowledge/understanding in military demining:	(1:none, 5: in depth)	3
Level of knowledge/understanding in humanitarian demining:	(1:none, 5: in depth)	3
No. of years involved in HD: 1		
Details (type of involvement): MSc Thesis projects, robotics research.		
Main sources of information on humanitarian demining:		
<input checked="" type="checkbox"/> direct contacts with deminers, (1:little, 5: mostly used) 1		
<input checked="" type="checkbox"/> field visits, (1:little, 5: mostly used) 1		
<input checked="" type="checkbox"/> literature, (1:little, 5: mostly used), which literature source is used on a frequent basis 2		
Journal: The Journal of Mine Action		
<input checked="" type="checkbox"/> Internet, (1:little, 5: mostly used), which site is used on a frequent basis 5		
Web address: http://www.eudem.vub.ac.be , http://www.icbl.org , http://www.mech.uwa.edu.au/jpt/demining , www.gichd.ch , www.npaid.no , http://www.icrc.org , http://www.mineactionstandards.org , http://www.mineaction.org , http://www.landmines.org.uk		
Frequency of field visits: 2		
1: none;		
2: sporadically (once a year)		
3: regularly (several times a year)		
Where: indicate geographical zones/countries: Kosovo.		
Frequency of contacts with deminers: 2		
1: none;		
2: sporadically (once a year)		
3: regularly (several times a year)		
Who (names + contact details): Major Rexa (Kosovo Protection Corps, Prishtina), Martin Auracher (DEMIRA, demira@demira.org)		
Knowledge of demining operations: (ex. SOPs (Standard Operating Procedures))		(1:none, 5: in depth) 3
Details: Learned from literature, Internet, personal communications and visits on field		
Knowledge of deminers' requirements: (ex. SORs (Statements Of Requests), "wish lists")		(1:none, 5: in depth) 1
Details:		
Financial Sources of your research activities (who is financing the research carried out): PMAR Lab, DIMEC, University of Genova.		
Would you like to know more on humanitarian demining (yes/no/yes and already planned): Yes and already planned.		
What and at which frequency:		
<input type="radio"/> ad hoc courses,		
<input checked="" type="radio"/> field visits;		

<input type="radio"/> weekly <input type="radio"/> monthly updates	
Knowledge of the UXO problem (UneXploded Ordnance):	(1:none, 5: in depth) 2
UXO problem taken into account in your research: How has it been taken into account? (describe)	(1:no, 5: fully) 1
Technologies studied (list which ones) : <input type="radio"/> GPR <input type="radio"/> MD <input type="radio"/> Combined multi sensor detection systems (details, which sensors) <input checked="" type="checkbox"/> mechanical equipment <input type="radio"/> remotely operated detection systems <input checked="" type="checkbox"/> remotely operated area reduction systems <input checked="" type="checkbox"/> chemical systems (e.g. Biosensor) <input type="radio"/>	
Kind of research (applied or fundamental): <input checked="" type="checkbox"/> Short Term <input type="radio"/> Long Term:	
In which application areas: <input type="radio"/> hand held <input type="radio"/> vehicle based <input type="radio"/> air borne <input checked="" type="checkbox"/> Remotely operated worm-like detection system.	
Aimed at <input checked="" type="checkbox"/> AP <input type="radio"/> AT <input type="radio"/> UXO <input type="radio"/>	
Overlaps between technologies from other application domains (e.g. medical/geoscience): which ones and how? Directional drilling machines; the designed machine is adapted from horizontal directional drilling machines (traditionally used for trenchless drilling of the ground to install electronic cables).	
Research activities related to a specific country or area: Where thick vegetation grows. (ex. Cambodia)	
<u>PART II: Knowledge of other (R&D) activities, esp. EC.</u>	
Knowledge of ongoing EC R&D projects related to humanitarian demining:	(1:none, 5: in depth) 3
Knowledge of other R&D projects related to humanitarian demining:	(1:none, 5: in depth) 2
Details: We are involved in HUDEM (Humanitarian Demining Technology Exploration), CLAWAR (Climbing and Walking Robots).	
Would you like to know more on current research activities <input checked="" type="checkbox"/> yes <input type="radio"/> no <input type="radio"/> yes and already planned:	
What and at which frequency: <input checked="" type="checkbox"/> newsletter, <input checked="" type="checkbox"/> workshop, <input checked="" type="checkbox"/> conference, <input checked="" type="checkbox"/> e-mail;	
<input checked="" type="checkbox"/> weekly updates <input type="radio"/> monthly updates	

Preference for "push" or "pull" technique: **push**
(ex. receiving possibly unsorted e-mail, or looking up oneself and selecting the information)

PART III: Involvement in Product/System testing.

Have you already been involved in equipment testing: **No**
(yes, ongoing, no)

Details:

Do you have own test facilities? (Yes/no) **No**

Which ones?

- sand box indoor
- sand box with environmental control facilities indoor
- sand box outdoors
- sand box with environmental control facilities outdoors
- dummy minefields in controlled conditions
- dummy minefields in less controlled conditions (e.g. Croatia, Angola etc)

What kind of tests are performed?

and how?

- own test methods
- ITEP proposed methods
- nationally indicated methods?
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Is any further equipment testing planned: **No**
(none; in the lab, under internal controlled conditions, under external controlled conditions, in the field)

Details:

Type of product/system at which you are aiming + indication of how (with which funding/partners):

Remotely operated worm-like system designed to automate the REST sampling phase in highly vegetated areas, for area reduction purposes, and remotely-operated sensor platforms for area reduction in highly vegetated areas.

What is the state of maturity of your programme?

- Research,
- Breadboard (preliminary assembly of hardware to prove feasibility of proposed system, without regard to packaging, reliability or, often, safety).
- Prototype,
- Pre-Production,
- Production (if so what volume has been produced to date and what is the planned production rate per annum).

What further budget will you require to reach each stage? **It is still too early to know.**

Have you used your: equipment / prototypes / research breadboards on test sites? **No**

What test sites?

How many mines?

What type?

What performance statistics did you obtain?

What sample set size did you use?

What soil weather conditions did you use?

How did the operators perform?

What was their response / performance

Assuming budget availability, how soon could you personally carry out demining operations with your equipment? in days, weeks months years? weeks

Are you taking into account social studies:

socio-economic surveys/

environmental factors/

physical limitations of the technologies/

operational scenarios:

How: **The designed machine is modular, simple and low-cost. It is easy to run and maintain.**

Do you disseminate the results? **Yes**

How?

Participation to conference

Scientific Journals

other specialised publications

JMU/MAIC?

PART IV: General Comments:

Comments on the EUDEM2 initiative in general:

EUDEM2 is doing a very important job; providing a bridge between researchers and users is vitally important.

Questionnaire: complete.

Comments on the concept of an Open, Detailed Web based Database/Information Center (ex. EUDEM2):

It is very important to disseminate research results for free to as many people as possible.

For EC projects only: what exploitation plans exist and when will the first pre-production models be available for evaluation?

Comments on the way EC projects are financed, suggestions:

**Please send us a copy of your reference material together with the fully approved complete questionnaire by separate mail to the following address:*

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