



Mine clearance and science

- *By René Joecklé*
- *President of ARTID*

Association de Recherche de Techniques Innovantes en Déminage humanitaire

Association for research of innovative techniques in humanitarian mine clearance

ARTID

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Purpose

- **improvement of the efficiency of the humanitarian mine clearance by scientific studies of new techniques**
- Objectives of the association
 - *To contribute by scientific studies to the improvement of new techniques for the detection, identification and neutralisation of antipersonnel mines.*
 - *To promote the co-operation of research centres, universities, schools*
 - *To transfer the developed techniques to humanitarian organisations which are involved in mines clearance*

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Methods

- *sensitisation of scientists to the problems of mine clearance*
- *Practical information about the mine problem, in the ARTIDs web page: www.artid.org.*
- *The fundamental studies take place in laboratories, universities, schools*
- *As first step, an ideas-contest Brain StormMINE*

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Peculiarities of the association

- *The R&D programs (ESPRIT) connect research centres and industrial partners.*
- *exactly defined aim*
- *a close time frame (2-3 years).*
- *appropriate budget*
- *market-driven*
- *ARTID : non-profit association (volunteers)*
- *"upstream" research (new techniques),*
- *long-term objectives*
- *humanitarian purpose*
- *ARTID = scientific NGO*

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Brain StorMINE

- the creative ideas are to be found by the young people. (*Professor BOLMONT*)
- organisation of an ideas-contest for young people (students)
- sensitisation of the scientific world
- develop a creative idea which should improve an aspect of the technical problem of the humanitarian mine clearance
- similar to canadian contest

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Brain StorMINE Organisation

- Geographic area of the contest
 - France, Germany and Switzerland.
 - The languages of the contest are French and German
- information about mines and mine clearance,
 - documentation on WEBpage www.artid.org.
 - (Now in French language, will be translated later)
- Prices
 - The best innovative idea Price of 10 000 FF (given by the Conseil Général of Haut-Rhin)
 - The best single work Price of 5 000 FF
 - The best group work Price of 5 000 FF
- Brain StorMINE takes place on the NET (www.artid.org)



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Monsieur Hubert
CURIEN





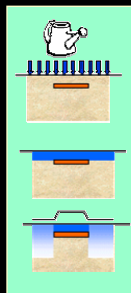
Documentation and suggested techniques

- Contents of ARTIDs documentation
- *To introduce scientists or technicians into the mine clearance problem.*
- *differences between military and humanitarian mine clearance.*
- *short description of the mines (more detailed information can be found in mine databases)*
- *mine clearance procedures (Links to GICHD, different MACs, NGOs).*
- *Review of mine-clearance techniques*
- Suggested new techniques
 - **active detection**
 - **improvement of manual prodding**
 - **improvement of neutralisation.**

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active detection



- *watering the ground with warm water*
- *observing the temperature distribution of the surface*
- *A buried item produces a higher temperature at the surface.*
- *Other markers can be used in water : ions, magnetic particles, chemical markers*

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Relationship

- *ARTIDs members are nearly all scientists.*
- *local and regional (political, scientific, educational) authorities*
- *relationships with national (French CNEMA) and international organisations*

- **"Swiss Deminers Group".**
- *informal group meets two or three times a year*
- *brings together people involved in mine clearance*
- *main task of the group is exchange of information*
- *Animator of the group is John CRAWFORD (PSI)*

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Summary

- ARTID, borne in France in March 2000, is a non-profit scientific NGO
- It intends to improve the efficiency of the demining techniques by initiating fundamental scientific studies
- ARTID gathers a practical documentation in its website www.artid.org
- Studies will be carried out in research centres, universities, schools, by students, trainees, graduate
- A competition, Brain StorMINE, is launched for sensitising young scientists to the improvement of technical aspects of demining
- Relationships are built up with different authorities, universities, schools, NGO and especially with the "Swiss deminers group"

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