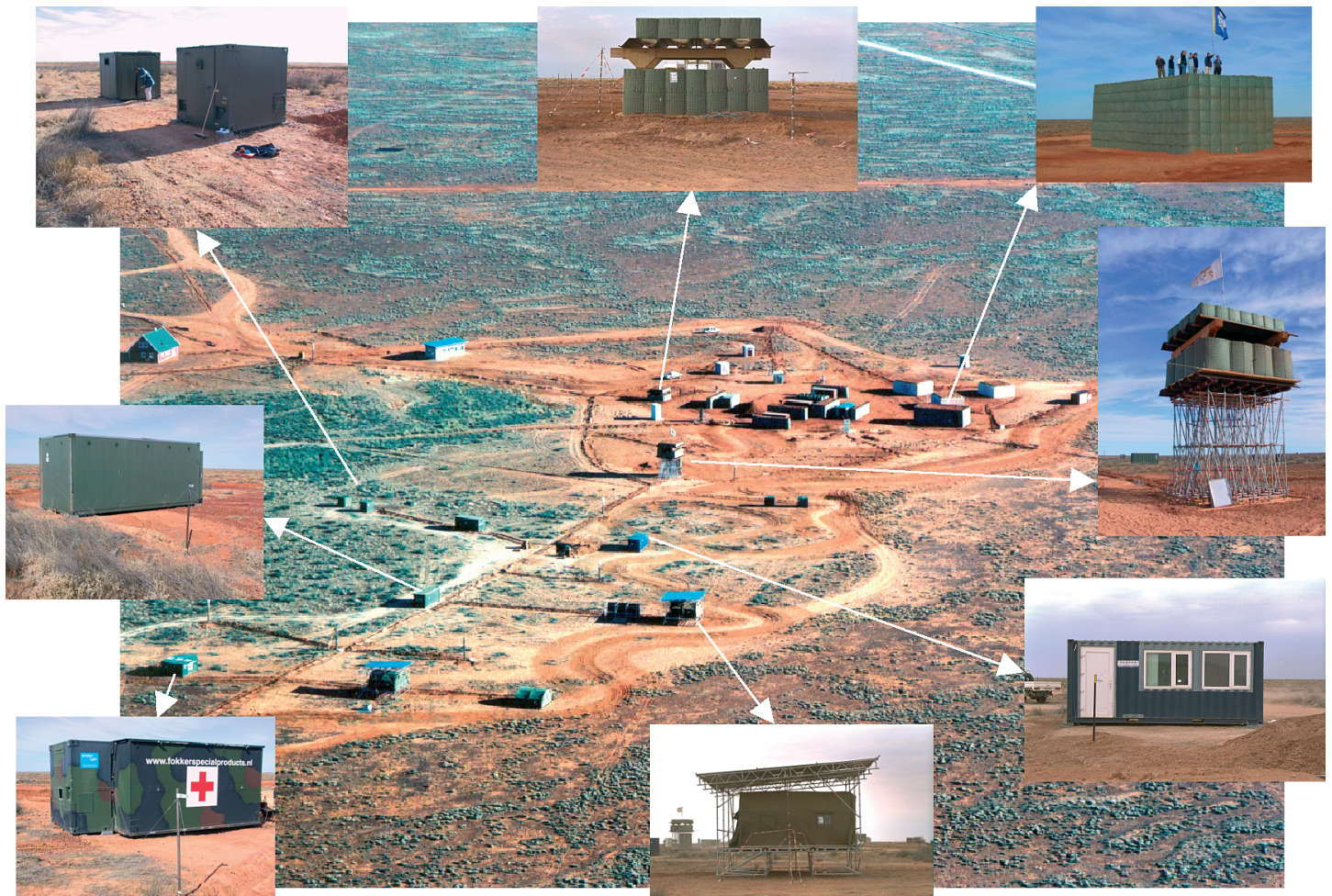


Safe Field Storage of Ammunition



Aim:

- Develop guidelines for safe operational storage of ammunition and explosives in Out-of-Area conditions;
- Gain better understanding of sympathetic detonation phenomena and blast vulnerability of troops in military field structures.

Problem description:

- Temporary storage high risk as compared with permanent storage (enemy fire, storage conditions, handling, small perimeter);
- Balance between explosives safety principles and operational demands.



Research programme:

- Effects based approach;
- Fundamental research;
 - Theoretical;
 - Numerical simulation explosion phenomena and structural response.
- Validation Trials:
 - Participation in UK-Australian Defense Trials;
 - 40-tonnes trial (1999), 27-tonnes and 5-tonnes trial (2002), 5-tonnes trials (2004);
 - Woomera, South Australia;
 - Measurement of blast/fragment loading and structural response.

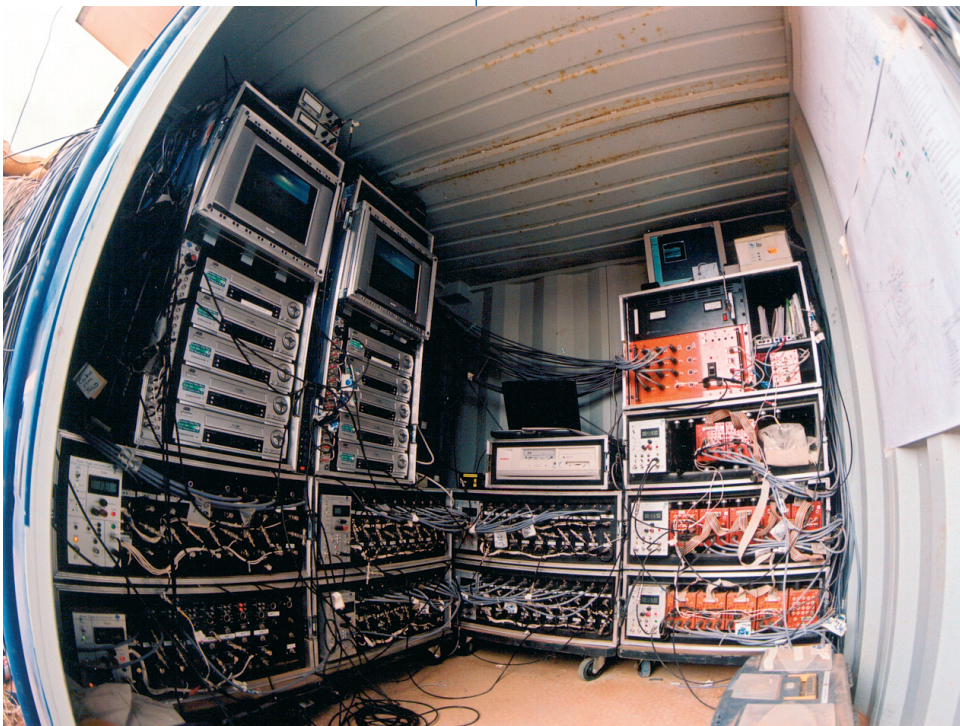


Results:

- New optimized Quantity Distances have been developed for;
 - Preventing sympathetic detonations;
 - Protecting troops and materiel.

Future:

- Risk based approach;
- Joint NATO effort.



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