

NGRAIN PROVIDES THE CANADIAN FORCES WITH ANYTIME, ANYWHERE ACCESS TO MISSION CRITICAL LANDMINE INFORMATION ON A RUGGEDIZED PDA (R-PDA) PLATFORM

BACKGROUND

The Canadian Forces (CF) has a requirement to train its personnel on the operating principles of foreign landmines to enable the CF to operate safely while in deployed operations. It also has the requirement to prepare those individuals and units who will be required to neutralize live mines in deployed theatre of operations. Additionally, the CF needs to accurately train on the mines without the problems associated with acquisition, transportation, storage and handling of physical mines.

The National Defence Mine/Countermine Information Centre (NDMIC) coordinates and provides the Canadian Forces with timely and effective mine and countermine information to reduce the risk of landmine casualties.

The Department of National Defence developed a web-based Canadian Forces Landmine Database (CFLD) of landmine data, photos, and reference materials. The database also links to approximately two hundred NGRAIN interactive 3D landmine objects used for awareness training. Users can interact with the 3D mines by rotating on all angles, cross-sectioning to view the internal configuration, and interacting with animations of critical procedures. Users can access and cross-reference to these 3D mine objects, field photos, and relevant information from the same search results pages that are part of the database. It is a knowledge base of text, photos, and interactive 3D objects of mission critical landmine information. This information, including the 3D objects, can be accessed on desktop computers, laptops, Tablet PCs, and is currently available via CD. It is expected that the 3D objects will be available shortly through the CF Defense Wide Area Network (DWAN).

CHALLENGE

It is critical that soldiers in the field have access to technical information about landmine internal and external characteristics, as well as details regarding safe handling and disposal. The Department of National Defence (DND) required its web-based CF landmine database to be ported to ruggedized milspec personal digital assistant (R-PDA) devices in order to provide this information to soldiers in field operations.

SOLUTION

NGRAIN has ported the existing web-based CF landmine database to run locally on the R-PDA platform. The database is searchable in the same manner as the current solution running on the DWAN and personal computers. Soldiers in the field are able to turn to their R-PDA devices to effectively neutralize the mines. Using the R-PDA deployed soldiers will be able to view detailed parts information, move, rotate, zoom, and cross-section mine objects, as well as attach and detach parts.

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- Master Warrant Officer Tom Stewart, Canadian Forces, J3 Engineer Operations

Regular updates of the database will be available for download from secure DND networks onto local field computers and R-PDAs.

RESULTS

Providing the CF landmine database and 3D mine objects on R-PDA devices means that soldiers will be equipped with instant access to mine information when and where their mission requires it. Through continual interaction with the 3D

objects and increased knowledge of critical information of the individual mines, training times will be shortened, training costs dramatically reduced, and operating in a mined environment becomes significantly safer, reducing the risk to individual soldiers.



A Ruggedized Milspec Personal Digital Assistant

"With NGRAIN, the speed at which interactive 3D content can be produced, distributed, and viewed means that Canadian Forces personnel have the tools necessary to execute the mission where and when needed," said Master Warrant Officer Tom Stewart, Canadian Forces, J3 Engineer Operations. "The advent of the R-PDA capability represents a tremendous leap forward in our ability to provide first-class information that is unequalled by any other country and accessible anywhere, anytime, resulting in reduced safety risks through better training and instant access to critical information in the field."



Interactive 3D Elsie Landmine Object

Contact army@ngrain.com for more details about this project.

NGRAIN (US) Corporation
800 Fifth Avenue, #101 A
Seattle, WA 98104

NGRAIN (Canada) Corporation
Suite 250 – 1818 Cornwall Avenue
Vancouver, BC V6J 1C7

Telephone:
North America: (Toll Free)
1.866.420.1781
International:
1.604.669.9973

Fax:
North America: (Toll Free)
1.877.279.1422
International:
1.604.669.9972

Website:
www.ngrain.com