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Speech by Mr Peter Ho, Permanent Secretary (Defence Development), at the Signing Ceremony for the MOU on the Establishment of Protective Technology Centres

29 Sep 1998

Vice Chancellor of NUS, Professor Lim Pin,
President of NTU, Dr Cham Tao Soon,
Distinguished guests,
Ladies and gentlemen,

I am pleased to be here this afternoon to witness the signing of the MOUs for the establishment of the Centre for Protective Technology at the National University of Singapore and the Protective Technology Research Centre at the Nanyang Technological University.

1942 was a painful year for Singapore and our people. The bombardment of Singapore caused much devastation. There was nowhere for the people to hide from the bombs raining on them. As a result, many were killed and maimed, and many buildings were destroyed. We must learn from this sad episode in our history. We must continuously strengthen our defence capability to withstand such threats.

The 21st century will see military platforms becoming more versatile, and better equipped for all-weather, day and night operations. Sensors will become more sophisticated and accurate, and weapon systems more precise and lethal. While bombs and missiles will continue to be used, there will also be greater use of Precision Guided Munitions by attacking forces.

In such an environment, Singapore's defence capabilities must also include the capability to develop protective structures which can withstand any attack. We have to harness the full range of protective technologies for civilians, command, control and communications sites or

military facilities. The innovative application of protective technologies to these infrastructures will enhance the protection for the people who use them and the buildings themselves. This will also mean that we can better sustain our operational capabilities and readiness.

Over the years, MINDEF's Lands and Estates Organisation (LEO) has built up its experience and expertise in protective technologies, and thereby provided better protection for our strategic and military facilities. LEO has also shared its capabilities with the other agencies in Singapore responsible for the protection of our infrastructures and population and in that way, contributed to Singapore's civil defence and residential shelters programme.

LEO has also built up its international credentials in protective technologies. LEO has been invited to attend a special NATO meeting on underground storage, where it will present its research on ground shock. In extending the invitation to Singapore, NATO noted that Singapore was the only nation that had actually done recent work related to the response of multi-storey buildings, so Singapore's participation in the meeting was rather important.

This is not an insignificant achievement, and is one example of the pay-offs from the vibrant R&D activities in protective technologies that is on-going between LEO and the universities.

But there is more that can be done to harness protective technologies. To do so, our R&D in protective technologies must be expanded. LEO has therefore teamed up with our two universities to accelerate R&D in protective technologies. The result is the Protective Technology Centres in both the NUS and NTU. The plan to set up these centres was first announced last November by the 2nd Minister for Defence Rear Admiral Teo Chee Hean, and in less than a year, these research centres have been formed.

These two centres will allow us to leverage on the advanced engineering and R&D expertise available in both universities to spearhead fundamental and applied R&D efforts to meet the nation's needs in protective technologies and structures. With the set-up of the two Protective Technology Centres, we should see more focused and concerted R&D efforts in protective technologies. This will not only be in-house, but also through participation in collaborative programmes with established and renowned foreign research institutions and industries. With the synergy these self-supporting research centres share with LEO and other agencies in terms of resources and research efforts, we are confident that new and better protective technologies and structures will be developed for Singapore's needs into the future.

R&D findings and engineering projects have to be supported by test and experimentation. To this end, MINDEF regularly conducts large scale explosive testing of structural components (ETSC). MINDEF will be carrying out the next ETSC in October this year to validate the survivability of some MINDEF's protective structures. Together with the other agencies, we will also be testing the designs of residential shelters to verify their strength in withstanding explosions. With the set up of the Protective Technology Centres, we expect to be able to make better use of the results of these tests.

The signing of the MOUs this afternoon signifies the official establishment of the Centre for Protective Technology at NUS and the Protective Technology Research Centre at NTU. I would like to thank the officers from NUS, NTU, LEO and MINDEF's Directorate of Research & Development who have worked hard to bring the ideas to fruition. I wish both Centres every success in their future endeavours. I am confident that with the concerted efforts and co-operation of MINDEF, NUS and NTU, these research centres will make a valuable contribution to the development of protective technologies, and the defence of Singapore and its people.

News Release:

- MINDEF & Local Universities Jointly Set Up Research Centres for Protective Technology (Document No: MINDEF_19980929001.pdf)

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