## Sequence of events leading to CFC Liu Kai's death

Before a Bionix armoured vehicle mounted a Land Rover and killed Corporal First Class Liu Kai on Nov 3 last year, both vehicles were closer to each other than allowed under the safety distance rules. There appeared to be a communication breakdown between personnel in both vehicles and the Bionix failed to stop reversing further.

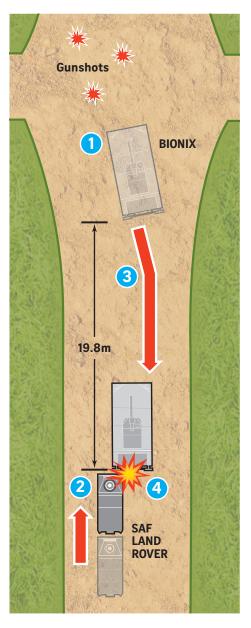
## **HOW IT HAPPENED**

At around 9.58am, 1 the Bionix stops ahead of a junction after spotting other vehicles passing by. Trailing behind is a Land Rover driven by Corporal First Class Liu Kai, which also stops at this point. CFC Liu moves the

2 Land Rover forward, upon hearing the vehicle commander's instructions to overtake the Bionix, and stops the vehicle after hearing gun shots fired as part of the exercise. This leaves it 19.8m behind the Bionix, which is less than the safety distance of 30m.

Four seconds later. 3 the Bionix starts to reverse as part of an extrication drill in response to the gun shots fired. As the Bionix driver steers the vehicle slightly to correct a "drift" in its reverse direction, it finds the Land Rover in its path.

The Bionix 4 continues its reverse manoeuvre until it mounts the Land Rover on the driver's side.



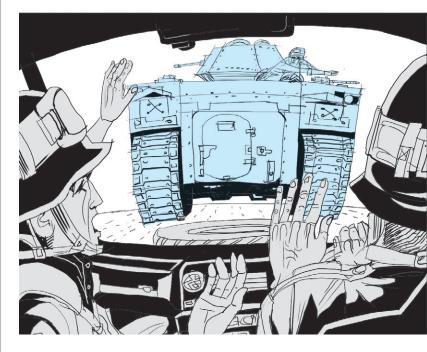
Almost immediately after the Bionix begins reversing, a rear guide in the armoured vehicle gestures at the Land Rover driven by Corporal First Class Liu Kai to move away, pushing the microphone of his helmet closer to his mouth. He repeatedly tells the Bionix driver to stop but to no avail.





**Rear guide** 

Seeing the reversing Bionix, the trainer in the Land Rover taps CFC Liu and signals for him to reverse the vehicle away from the oncoming Bionix. Both of them shout and gesture at the armoured vehicle to stop. The trainer also tries to grab the radio set to communicate with the Bionix crew



After the Bionix mounts the driver's side of the Land Rover, it traps CFC Liu but the trai manages to escape. The trainer notifies the conducting officer, who orders the exercise to stop immediately. 0 CFC Liu is pronounced 0 dead on site. C F 5 T 0







Driver



## SPECIFICATIONS

| BIONIX   |                                      | I<br>I | SAF LAND RO                      | VER  |
|----------|--------------------------------------|--------|----------------------------------|------|
| Width    | 3.87m                                |        | Width                            | 1.79 |
| Speed    | 74kmh                                | 1      | Length                           | 4.6  |
| Weight   | 24 tonnes (combat loaded)            | i      | Kerb weight                      | 2,0  |
| Armament | or MK 19 40 automatic                | I<br>I | Top speed                        | 145  |
|          |                                      | 1      | Power                            | 122  |
| _ ·      | grenade launcher                     | ÷      | Engine capacity                  | 2,19 |
| Engine   | 475 horsepower DDC 6Y<br>92TA diesel |        |                                  |      |
| S. A.    | 3.28m                                |        | erage human<br>ight: <b>1.7m</b> |      |

| Width           | 1.79m   |
|-----------------|---------|
| Length          | 4.64m   |
| Kerb weight     | 2,062kg |
| Top speed       | 145kmh  |
| Power           | 122bhp  |
| Engine capacity | 2,198cc |

2.02m

Source: MINDEF PHOTOS: MINDEF, ST FILE ILLUSTRATION: CEL GULAPA STRAITS TIMES GRAPHICS