

## Proposal for the Simulation Capability of the Freefall Control Feature Set

To: T13 Technical Committee  
 From: Joseph Chen  
 Samsung  
 75 W. Plumeria Drive  
 San Jose, CA 95134  
 Phone: 408-544-5766  
 Email: [joseph.chen@samsung.com](mailto:joseph.chen@samsung.com)  
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This document provides a capability for the device that Freefall Control feature set to execute a freefall simulation event.

### Change to SET FEATURE Command

When the Freefall Control feature set is enabled, the device can accept the SET FEATURE Freefall Simulation subcommand.

- SET FEATURE command with Feature Code “83h:” Simulate Freefall Event.

The SET FEATURE Freefall Simulation subcommand uses the following task file registers as inputs to control the simulated Freefall:

Register	7	6	5	4	3	2	1	0
Feature	<b>83h</b>							
Sector Count	<b>Simulate Event Time (in seconds), 0 is Device Specific</b>							
LBA Low	<b>Delay to Simulated Event (ms) bits [7: 0]</b>							
LBA Mid	<b>Delay to Simulated Event (ms) bits [15: 8]</b>							
LBA High	<b>Reserved</b>							

This command allows the host to generate a simulated Freefall Control event for the testing of the host software handling. After completing of this command, at the given delay passes, a simulated high acceleration event is triggered. The presence of this feature and the accuracy of this time is vendor dependent.

The Simulate Event Time defines the duration of the freefall event host wishes to test. A value of zero allows the device to determine its own freefall duration for the simulation.

Supporting of this feature is optional. Supporting of the freefall simulate subcommand code is **required (or optional)** when the Freefall Control feature is supported.

### Simulated Delay Event