

Task A: Red Alert Sequence

User: "Computer, please begin voice interaction sequence with response setting medium."

Computer: "Hello Commander Sengupta, please begin."

Sengupta: "Initiate Red Alert Sequence"

Computer: "Initiating Red Alert Sequence"

Sengupta: Type Red Alert Message into console

Sengupta: Confirm Message

Computer: "Please select an encryption and priority level."

Sengupta: Select Encryption and Priority Levels

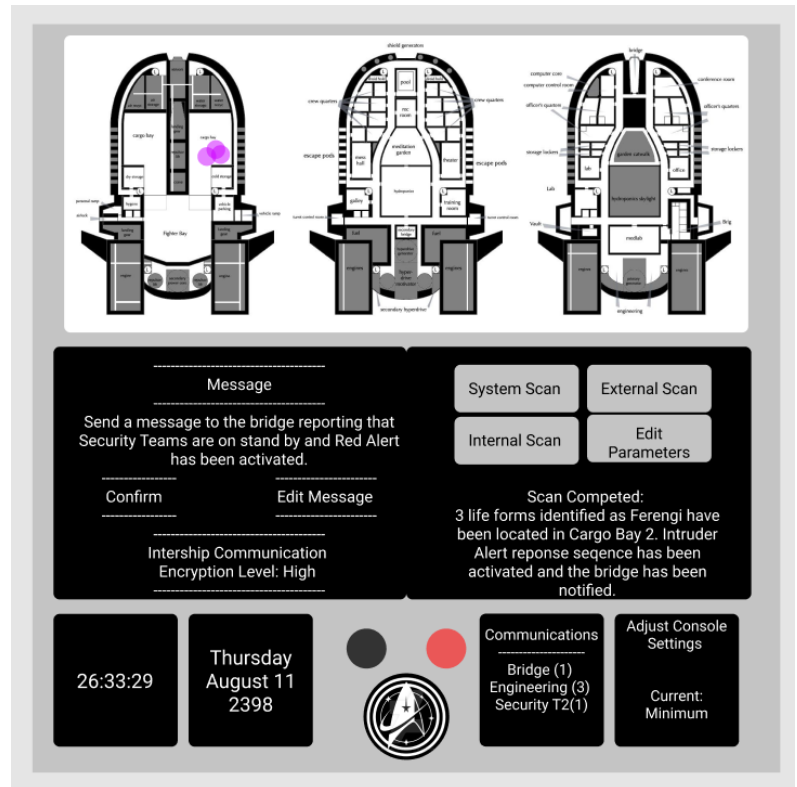
Computer: Begin Red Alert Sequence

Send Red Alert Message, Secure

Consoles, Ships Systems, and all Decks, initiate internal, external, and system scans, generate security report

Computer: "The ship's status has now been changed to Red Alert. All ship's crew and personnel have been notified, with security teams on stand-by. All exterior doors are sealed and locked with command level authorization. Consoles and all other ship systems have also been switched to Red Alert mode. Security scans have been initiated for internal and external scans. A systems security report has also been initiated and you will be alerted upon completion. Are there any other actions in need of execution at this time Commander?"

Sengupta: "Continue Red Alert."



Keystroke Level Model: Activating Red Alert		
Operator	Description	Duration (sec)
M	User Command – Voice Authorization, Response Setting	1.35 ^a
R(t)	Computer Response – Greeting, Authorization	t
M	User Command – Initiate Red Alert Sequence	1.35 ^a
R(t)	Computer Response – Beginning Red Alert Sequence	t
K	User Keystroke – Type Red Alert Message	1.20 ^a

K	Button Press – Confirm Message	0.12 ^a
R(t)	Computer Response – Request Encryption and Priority	t
K	Button Press – Select Encryption and Priority	0.12 ^a
R(t)	Computer Action – Send Red Alert Message	t ²
R(t)	Computer Action – Secure Consoles/Systems	t ²
R(t)	Computer Action – Initiating Scans	t ²
R(t)	Computer Action – Initiating Security report	t ²
R(t)	Computer Response – Update user regarding Red Alert status, request further command	t
M	User Command – end task	0.75 ^a
a: Skill Level 2 , t: Computer Processor 2.63 sec		22.5606

$$3.645 + 10.52 + 27.6676 + 0.0288$$

After feedback, user preparation steps were added into account for the user typing the message and confirming its accuracy. Secondly, a step to switch the ship status indicator was included since a change to the console occurs.

Modified Keystroke Level Model: Activating Red Alert		
Operator	Description	Duration (sec)
M	User Command – Voice Authorization, Response Setting	1.35 ^a
R(t)	Computer Response – Greeting, Authorization	t
M	User Command – Initiate Red Alert Sequence	1.35 ^a
R(t)	Computer Response – Beginning Red Alert Sequence	t
M	User Preparation – Message	1.75 ^a
K	User Keystroke – Type Red Alert Message	1.20 ^a
M	User Preparation – Read Message on Console	0.75 ^a
K	Button Press – Confirm Message	0.12 ^a
R(t)	Computer Response – Request Encryption and Priority	t

K	Button Press – Select Encryption and Priority	0.12 ^a
R(t)	Computer Action – Switch to Red Alert	t ²
R(t)	Computer Action – Send Red Alert Message	t ²
R(t)	Computer Action – Secure Consoles/Systems	t ²
R(t)	Computer Action – Initiating Scans	t ²
R(t)	Computer Action – Initiating Security report	t ²
R(t)	Computer Response – Update user regarding Red Alert status, request further command	t
M	User Command – end task	0.75 ^a
a: Skill Level 2 , t: Computer Processor 2.63		33.1025