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The Ali-Scout Keyboard (95% actual size)

1 ISSUES

1. What are typical times for keystrokes and mental operations for navigation data entry using a compact alphanumeric keyboard with poor tactile feedback?
2. How well do various keystroke-level models predict actual performance?

2 METHOD

# of Subjects			# of Trials			
Age	Men	Women	Task	Real Ali-Scout		Simulated Ali-Scout
				Dusk	Night	Dusk
18 - 30	6	6	Retrieve destination from unit's memory	5	5	5
40 - 55	6	6	Enter new destination	5	5	5
> 65	6	6				

Task #1

Retrieve destination from memory

- Retrieve MAIN THEATER

Scroll through list Type characters

▲ ▼ OR A1 B2 C3 D4...
 L M N O...

MA_.....

(Subject has begun typing "MAIN")

MAIN THEATER?

(Once the "I" is typed, the rest of the name appears)

Task #2

Enter new destination into memory

- Enter KROGERS with coordinates (0832250W, 422908N)

Type characters ONLY A1 B2 C3 D4...
 L M N O...

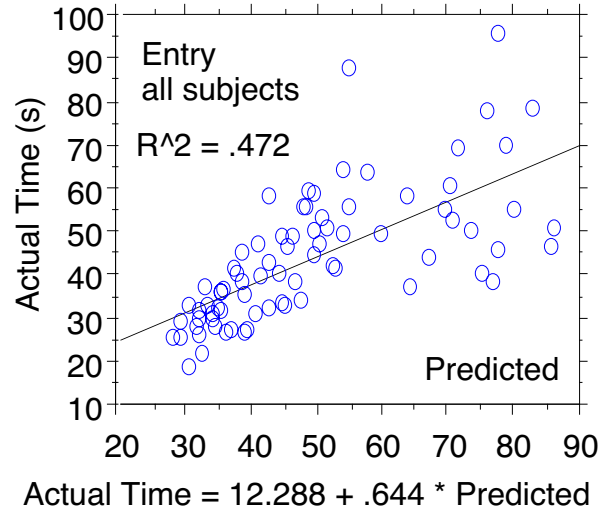
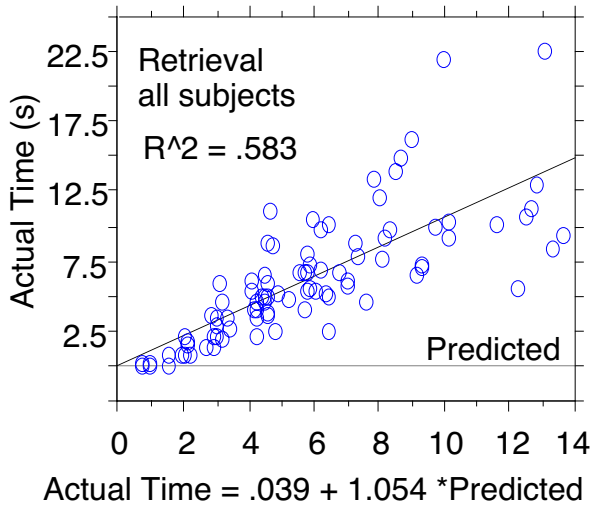
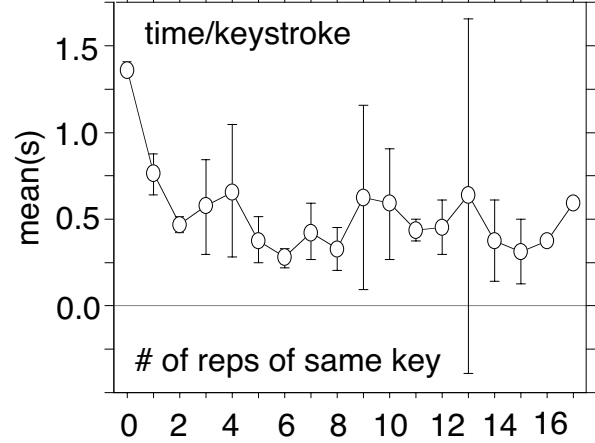
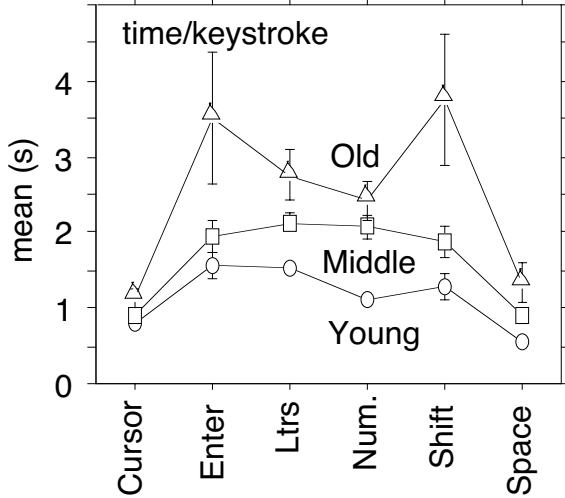
KROGERS_.....

(Subject has typed the destination name)

KROGERS
 0832250W 422908N_

(Subject has typed the coordinates)

3 RESULTS



4 CONCLUSIONS - Keystroke Model Adjustments to Consider

Step 1: Revised Values for K (s)

Key Category	---Repetition---		
	1st	2nd	>2nd
Cursor	1.71	0.69	0.47
Enter	1.55		
Letters	1.55	0.99	
Numbers	1.15	0.47	
Shift	1.46		
Space	0.60		

Step 2: Age Multiplier

Young	1.0
Middle	1.4
Older	2.2

} **Most important adjustment**

Step 3: Lighting Multiplier

Dusk	0.94
Night	1.06

Step 4: Adjust Mental time

M = 2.22 s