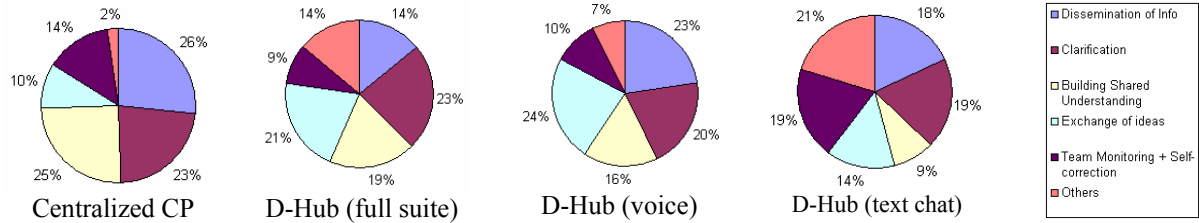


APPENDIX

Communication Activity

The pie charts in Figure 1 below provide an overview of the communication that took place as obtained through observer ratings (BARS) and scoring of video/voice recordings and text chat logs. The D-Hub communication profiles compiled from observers are based on their observations of the separate cells, hence the charts have the additional element of intra-cell communication that is not captured in the scoring based on recorded data. The communication data collected in Runs 3 & 4 provides insights into how the different modes of communication (text chat, video conferencing) are each used for different purposes, given the availability of both.

Communication Activity – Observer ratings



Communication Activity – Scoring based on video/voice recordings & text chat log

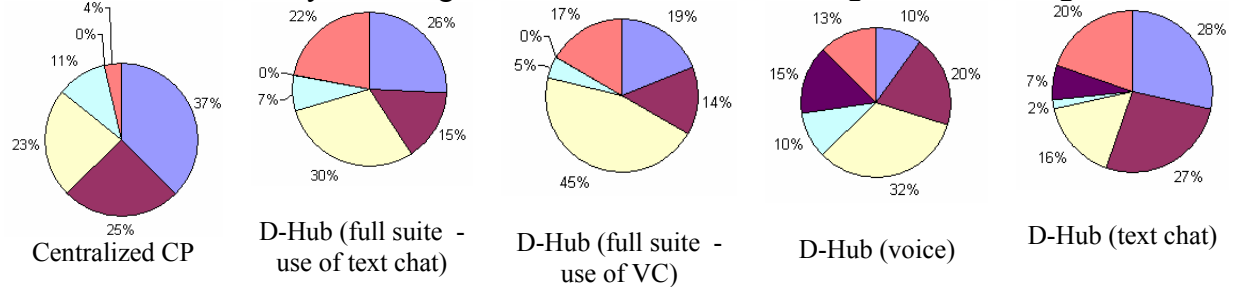


Figure 1. Pie charts of communication activity as obtained through observer ratings vs. scoring based on video/voice recordings & text chat logs

The index of concordance between observers and scoring of recorded data is only computed for the Centralised CP.

Kendall's W Test

Ranks	
	Mean Rank
DisseminateInfo	4.50
Clarification	4.46
ExchangeIdeas	3.04
BuildShared Understanding	4.54
TSM	2.50
TSC	1.96

Test Statistics	
N	14
Kendall's W ^a	.450
Chi-Square	31.516
df	5
Asymp. Sig.	.000

^a. Kendall's Coefficient of Concordance

Figure 2. Inter-rater agreement of observer ratings for Centralized CP

Wilcoxon Signed Ranks Test

		N	Mean Rank	Sum of Ranks
Dfull - Dcentral	Negative Ranks	3 ^a	2.00	6.00
	Positive Ranks	0 ^b	.00	.00
	Ties	0 ^c		
	Total	3		
Efull - Ecentral	Negative Ranks	0 ^d	.00	.00
	Positive Ranks	3 ^e	2.00	6.00
	Ties	0 ^f		
	Total	3		
Sfull - Scentral	Negative Ranks	3 ^g	2.00	6.00
	Positive Ranks	0 ^h	.00	.00
	Ties	0 ⁱ		
	Total	3		

a. Dfull < Dcentral

b. Dfull > Dcentral

c. Dfull = Dcentral

d. Efull < Ecentral

e. Efull > Ecentral

f. Efull = Ecentral

g. Sfull < Scentral

h. Sfull > Scentral

i. Sfull = Scentral

Prefix denotes type of communication:
 e.g. D refers to Dissemination of Information
 E refers to Exchange of Ideas
 S refers to Building Shared Understanding

Test Statistics^c

	Dfull - Dcentral	Efull - Ecentral	Sfull - Scentral
Z	-1.604 ^a	-1.604 ^b	-1.633 ^a
Asymp. Sig. (2-tailed)	.109	.109	.102

a. Based on positive ranks.

b. Based on negative ranks.

c. Wilcoxon Signed Ranks Test

Figure 3. Result of Wilcoxon Test that indicates significant differences (at 90%) in proportion of communication spent on Dissemination of Information, Exchange of Ideas, and Building Shared Understanding in D-hub (full suite) vs. Centralized CP

SAGAT

Friedman Test

Ranks	
	Mean Rank
L1central	3.10
L1full	2.30
L1voice	2.10
L1text	2.50

Test Statistics ^a	
N	5
Chi-Square	1.909
df	3
Asymp. Sig.	.591

a. Friedman Test

Friedman Test

Ranks	
	Mean Rank
L23central	2.00
L23full	2.30
L23voice	2.30
L23text	3.40

Test Statistics ^a	
N	5
Chi-Square	4.622
df	3
Asymp. Sig.	.202

a. Friedman Test

Figure 4. Results of Friedman Test (centralized vs. different D-hub setups) – Level 1 SA (left) and Level 2&3 SA (right)

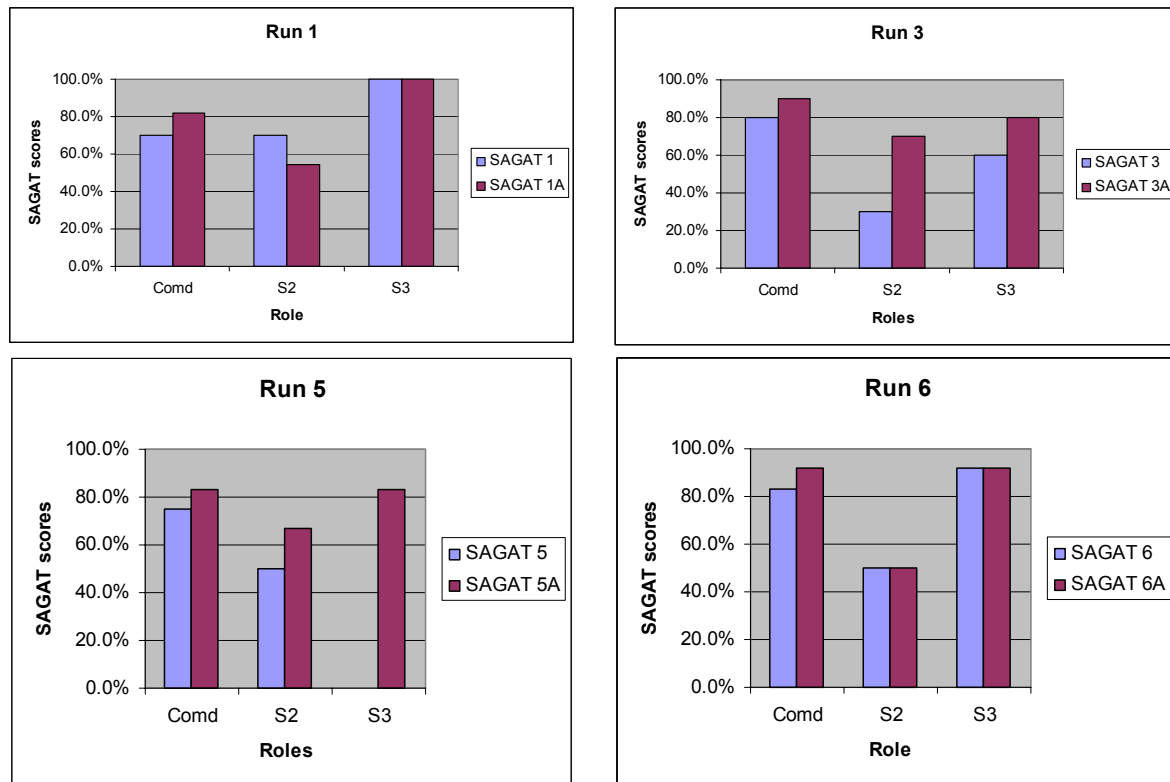


Figure 5. SA levels across SAGAT administrations for each run

Wilcoxon Signed Ranks Test

		Ranks		
		N	Mean Rank	Sum of Ranks
L23text - L23full	Negative Ranks	0 ^a	.00	.00
	Positive Ranks	4 ^b	2.50	10.00
	Ties	2 ^c		
	Total	6		
L23text - L23voice	Negative Ranks	0 ^d	.00	.00
	Positive Ranks	3 ^e	2.00	6.00
	Ties	2 ^f		
	Total	5		

- a. L23text < L23full
- b. L23text > L23full
- c. L23text = L23full
- d. L23text < L23voice
- e. L23text > L23voice
- f. L23text = L23voice

Test Statistics^b

	L23text - L23full	L23text - L23voice
Z	-1.841 ^a	-1.633 ^a
Asymp. Sig. (2-tailed)	.066	.102

- a. Based on negative ranks.
- b. Wilcoxon Signed Ranks Test

Figure 6.

Results of Wilcoxon Test that indicate significant differences in Level 2&3 SA between D-hub (full suite) vs. D-hub (text) and D-hub (voice) vs. D-hub (text)