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December 1982 REVISED JULY 1983

MANAGING TOTAL QUALITY 3M QUALITY MANAGEMENT SERVICES 612/778-7560

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A REMOTE VIEWING EVALUATION PROTOCOL (U)

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Final Report

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I OBJECTIVE (U)

(U) The objective of this task was to develop an evaluation procedure to assess the relative quality of a set of different remote viewing (RV) responses.

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II INTRODUCTION (U)

(U) In addressing the remote viewing (RV) evaluation question, we consider two separate requirements:

- Absolute evaluation of a single response for a single unknown target.
- Relative evaluation of a set of responses for a series of known targets.

The first of these is of the most interest in an operational setting. As part of the RV enhancement task, we have considered this problem in two ways. First, by conducting an operational RV session between two calibration RV sessions, a tentative a priori assessment of operational efficacy can be determined. The evaluation is made on the basis of performance during the calibration sessions, and on the basis of adherence to a predetermined session structure.

(U) A second technique for an a priori evaluation was explored as part of the Fiscal Year 1982 program in an audio-linguistic task. This task provided indications that careful linguistic analysis, when coupled with technical audio analysis, could yield an assessment in the absence of knowledge about the target.

(U), Various techniques have been used in the $past^{1}$ in an attempt to solve the relative evaluation problem. The most common of these was the simple rank ordering of all responses, as assessed against all possible targets used in an experimental series. In this procedure, a judge is presented with n RV transcripts and n target sites. His task is to arrange

* (U) References are listed at the end of this report.

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the transcripts in order of the best to least match for each of the n targets. A simple numerical counting procedure is then used to estimate the likelihood that the judge's transcript/target_matches are by chance alone.² This early technique contained little systematic structure for determining the final order of matches.

The first step toward systematizing the rank order judging procedure was to preprocess the raw data in the transcript by "conceptualizing" both the verbal and the pictorial responses. Conceptualizing a transcript requires an analyst to paraphrase the transcript into a list of coherent statements. This concept list is then compared and scored concept-by-concept to each of the targets in the experiment. The resulting scores are averaged for each response, and all responses are rank-ordered on the basis of these scores.³ This improved analysis procedure was applied to a number of experiments within the Technology Transfer Task

(U) The problem with the above technique is that there are no guidelines as to how the analyst should paraphrase the transcript; furthermore, the method in which the concepts are to be assessed against the targets remains undefined. The purpose of the Evaluation Task in FY 1982 was to identify a procedure that corrected these deficiencies.

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III ANALYSIS PROTOCOL (U)

(U) To quantify the analysis procedure, we have divided the task into four separate areas: subject response, target/task definition, quality assessment, and numerical analysis. Figure 1 is a sample RV Assessment Form that has been designed to emphasize the separation of the analysis tasks. Each of the parts of the form are described below.

(U) The subject's response should be prepared for analysis without any knowledge of either the target site or the overall task. The aim of this method of response preparation is to reduce a possibly redundant, rambling response to a coherent set of concepts. To meet this requirement we have developed a set of initial guidelines to the conceptualization procedure.

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(U) A concept is defined as a paraphrase of a single idea that has been expressed in the RV verbal or drawing response. That coherent idea should not be fragmented into component parts. For example, a response might be of the form, "I see a large, textured, gray building." The single concept that expresses this idea should be "large, textured, gray building," rather than four separate concepts--one for each word in the phrase. Each concept should be entered under the "Transcript Concept" column in the RV Assessment Form.

(U) For this initial evaluation technique, a particular concept should be used only once in the analysis. (Some weighting factor proportional to concept frequency could be utilized, but, for the initial attempt, only unique concepts are used.) If in the construction of the transcript concept list a concept later in the transcript is a duplicate of an earlier one, it should be so noted by placing the concept number of the original concept in the "D" column.

1	Begin Ti	ime:						Targ	et:_										Ŷ	lewer: _					<u></u>
1	End Time	e:						Meth	od o:	f Tar	get	ing	:						Da	ate:					<u> </u>
1	Length o	of Session:						Sess	ion:										C	lass:	<u> </u>				
	Concept Number		Trans	cript	Con	cept				D	Р		Ele	ement	of 1	large	t		Rele- rance (R)	Quality (Q)	\$core	P	(R _X Q	Score	Normalized Score
	1																						0	0	0.00
	2																						1	1	0.36
	3							~															2	2	0.71
	4																						3	3	1.07
N	5																						4	4	1.43
UATIC	6																						5	5	1.79
EVAL	7																						6	6	2.14
RIPT	8																						8	7	2.50
RANSC	9																						9	8	2.86
H	10		· · .																				10	9	3.21
	11																						12	10	3.57
	12											 											15	11	3.93
	13																						16	12	4.29
	14	ļ																					20	13	4.64
	15																						25	14	5.00
	# of	Score Concepts	0	1	2	3	4	5	6	7		8	9	10	11	12	13	14		Weigh	ted Ave	erage			

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SAMPLE RV ASSESSMENT FORM (U) FIGURE 1

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(U) To utilize an analysis procedure that is capable of quantitative assessment, it is necessary to define, in advance, what the goals of the assessment are. In the RV Assessment Form, columns "Element of Target" and "Relevance" are provided to clearly define the goal of the analysis. In the ideal situation, an RV target should be completely specified in advance. A target typically consists of a number of target elements, each of which may have varying relevance with regard to the overall RV task. For any given target, an independent list of target elements should be prepared. The selection of what constitutes a target element, is left completely to the discretion of the task coordinator. The target element must be selected with little regard to task relevance (target element relevance is accounted for later). Because an RV target consists, in principle, of an essentially infinite number of possible elements, discretion needs to be exercised in the selection process.

(U) For each target element identified for the site, the task coordinator must define a relevance rating. This rating allows the coordinator to tailor the analysis to the task requirements. Table 1 shows the scale that is used for the target element relevance rating.

Table 1

(U) TASK-DEFINED RELEVANCE SCALE FOR TARGET ELEMENTS (U)

Rating	Relevance Scale
1	A target element of trivial interest
2	A target element of minor interest
3	A target element of intermediate interest
4	A target element of major interest
5	A target element of key interest

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(U) For each transcript concept on the RV Assessment Form (Figure 1), the analyst should attempt to find the element on the list of target elements that he/she considers to be the best match. The analyst should be quite liberal in the concept/element matching (i.e., the <u>quality</u> of the match should be considered at this point in the analysis). If he/she is able to identify a target element that might be considered a match to the given concept, a 1 is placed in the "p" (present) column on the assessment form. If no element can be identified, a 0 is placed in the "p" column. After making a target element identification, the selected target element, and its corresponding overall relevance rating should be entered in the appropriate columns on the assessment form.

(U) Having identified a corresponding target element for each concept, it is now appropriate to assess the quality of the match. The quality assessment is done on the basis of how well the single concept in question matches the selected target element. The judgement is to be made without regard to any other issues, such as importance of the concept to the transcript, or importance (relevance) of the target element to the target. Table 2 shows the quality assessment scale that is used for this part of the analysis. The appropriate quality score from Table 2 is entered in the "Quality" column on the RV Assessment Form for each concept for which a matching target element has been identified.

(U) An intermediate numerical score is computed for each concept from the relevance and quality (Tables 1 and 2) evaluation as follows:

$S' = P \times R \times Q$,

where P is the value in the "p" column (0 or 1); R is the relevance evaluation; and 0 is the quality assessment. S' can assume values ranging between 0 and 25. Table 3 demonstrates how to determine the final score, S, for a given value of S' for each concept. The conversion table is

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Table 2

(U) QUALITY ASSESSMENT SCALE (U)

Rating	Discrimination Scale
1	Poor description; only one or two aspects of the material match.
2	Fair description; a few aspects of the material match, but a large ambiguity exists.
3	Reasonable description; many aspects of the material match, but there remains some ambiguity.
4	Good description; a large number of aspects of the material matches, but it is possible to conceive of material that would be a better match.
5	Excellent description; all or nearly all aspects of the material match.

Table 3

$= P \times R \times Q$ Score Normalized Score S

(U) NUMERICAL SCORE CONVERSION TABLE (U)

	1	
0	0	0.00
ù 1	1	0.35
· 2	2	0.71
3	3	1.07
4	4	1.43
5	5	1.79
6	6	2.14
8	7	2.50
9	8`	2.86
10	9	3.21
12	10	3.57
15	11	3.93
16	12	4.29
20	13	4.64
25	14	5.00
	I	L

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used to eliminate the nonuniformly-distributed gaps in scoring numbers that occur if one simply uses the product S'. Thus, the final score for each concept ranges from 0 to a maximum of 14. This conversion table is provided as part of the RV Assessment Form.

(U) If an assessment of an individual concept is required, the final score for each concept/target-element match can be related to the quality assessment scale by using the conversions shown in the third column of Table 3 and on the assessment sheet. It should be noted, however, that the integer scores are used to simplify the remaining calculations.

(U) To determine a final evaluation of the complete transcript assessed against a given target, a weighted average of concept scores is computed. To assist in the calculation of the weighted average, a tally box score is provided at the bottom of the RV Assessment Form. For each of the possible scores, 0 through 14, the number of concepts that attained that particular score are counted. For example, if 3 concepts were evaluated with a score of 12, a 3 is entered in the box below the 12 score. If the frequency of occurrence of score S_j is f_j , then the final weighted average is computed by

$$A_{k}' = \Sigma f_{j} \sqrt{f_{j}} X S_{j} / \Sigma f_{j} \sqrt{f_{j}}$$
$$A_{k} = 0.357 A_{k}'$$

(U) The normalized, weighted average score, A_k , is entered in the weighted average box on the assessment sheet. The weighted average score has been normalized to be within the range

$$0 \leq A_k \leq 5.0$$

To aid in the interpretation of the result, the quality assessment scale (Table 2) can be used to assess quality of the match between the whole RV response and the given target site.

(U) At this point in the evaluation protocol, the following options are available, depending on the task requirement:

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- An n X n rank ordering on the basis of the weighted averages.
- A simple selection of the best match.

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• A statistical evaluation on a concept-by-concept basis.

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IV CONCLUSIONS (U)

A protocol has been developed to address the relative evaluation portion of the overall RV transcript assessment problem. As a demonstration of the technique, we provide in Appendix A an analysis of a series of four remote viewings that were performed as calibrations

In this series the remote viewing products were of relatively high quality, but nonetheless require a sensitive technique to differentiate because of the similarity of the targets and, hence, of the descriptions. (The series was chosen primarily for that reason.) Application of the assessment technique resulted in the correct blind matching (highest scoring in matches versus cross matches) of three of the four.

(U) Appendix B is a one page, step-by-step procedure for the application of this evaluation technique.

(U) The material in this document thus constitutes an instruction manual or protocol for application of a step-by-step procedure for quantitative assessment of the relative target/transcript correlations of a series of transcripts matched into a series of targets.

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Appendix A

EVALUATION OF FOUR COORDINATE REMOTE VIEWINGS (U)

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On 14 December 1981, four coordinate remote viewings were conducted as calibrations

These four calibrations were

chosen as a test bed for the evaluation procedure for the following AppliCation reasons, (1) they were conducted in any setting, and (2) the targets had many similar features, and would thus provide a sensitive test of the protocol.

Figures A-1 through A-4 are the transcripts that were presented to the analyst. They are exactly as they were when collected, except that the coordinates have been removed. Figures A-5 through A-8 are the <u>National Geographic</u> magazine targets that were used during the calibration sessions. Finally, the task coordinator provided Tables A-1 through A-4 as target element relevance scales for the four targets in Figures A-5 through A-8. This completes the information that was given to the analyst, and thus the analysis was carried out blind as to the matching target/ transcript pairs.

(U) Table A-5 is a compilation of the completed work sheets that were used by the analyst in this evaluation. They are shown in groups by session number, and alphabetized on the four targets. (The task coordinator first randomized the transcript order then assigned the session number used above.) For each of the transcripts, the analyst simply included all phrases and all drawings as concepts. For example, seven concepts were found during Session 2.

(U) All concepts were then analyzed as described in the text. The matching target element, its relevance rating, and the computed score are shown for all possible combinations of transcript/target pairs in Table A-5. The score distributions and their resulting weighted averages are also shown in Table A-5.

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Aolfondone M777 Break.



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3 A doon Bad letre mouside.



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FIGURE A-4(b)

TRANSCRIPT 4 (concluded) (U)

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Table A-1

(U) TARGET ELEMENT RELEVANCE RATINGS FOR HANGO (U)

Target Element	Relevance
,	
Town	5
Cold	4
Peninsula	5
Rocky	3
Vegetation	2
Вау	3

Table A-2

(U) TARGET ELEMENT RELEVANCE RATINGS FOR INVERNESS (U)

Target Element	Relevance
City	5
River	4
Bridge	3
River banks	2
Vegetation	1

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Table A-3

(U) TARGET ELEMENT RELEVANCE RATINGS FOR FERNANDO DE NORONHA (U)

Target Element	Relevance
Island	5
Surf	3
Hills	4
Uninhabited	3
Mountain peak	3
Temperate climate	2
Vegetation	2
Ocean	4

Table A-4

(U) TARGET ELEMENT RELEVANCE RATINGS FOR PUNKAHARJU (U)

Target Element	Relevance
Connect lakes	5
Town	4
Bridges	2
Cold	4
Vegetation	1
Islands	4

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Concept Number				ansci	ript (Conce	- pt			D	P	Ele	ement	of Ta	rget		Bele- Vance (R)	Quality (Q)	Score	PxRxQ	BOOT			
1	Р	lictu	re 1								1	Twin	church	towe	rs		1	1	1	0	0			
2	P	lctu	re 2				• • ·			1										1	1			
3	U	lp an	d dow	n							1	Build	ings				5	1	5	2	2			
4	R	locky									0								o	3	3			
5	l	, and/	water	inte	rface						1	River					4	4	12	4	4			
6	P	Pictu	re 3								1	Twin	church	towe	rs		1	1	1	5	5			
7	F	Pictu	re 4								1	River					4	4	12	6	6			
8	U	pris	ing				ي حص				1	Build	ings				5	1	5	8	7			
9		Cliff									0			, ,					0	9	8			
10	F	jord	8								1	River					5	1	5	10	9			
11		Coast	al ci	ty							1	City					5	4	20	12	10			
12	\bot																	 		15	11			
13	1														<u></u>					16	12			
14								- <u></u>												20	13			
15			 .																	25	14			
S	Scor	re	0	1	2	3	4	5	6	7	, <u> </u>	9	10	11	12	13	14							
Cond	cept	s	2	5		 	3	3	 	+	+				2	1		Wei	ghted	Aver	age			
		1	2	,		L									2									

TABLE A-5 RV ASSESSMENT FORMS FOR CALIBRATION OF REMOTE VIEWING (U)

Begin Ti	ne:	12:4	10			-	Ta	rget:		F	langö					V	iewer: _	#00	02			
and Time Length o	: [Sessi	on:				<u>-</u>	Me [.] Se	thod ssion	of T :	arget	ing:1	Coordi	nates			D C	ate: lass:	4 Decei	nber B	198	1	
Concept Number		~T	ransc	ript (Conce	ot			D	Р	Ele	ement	of Ta	rget		Rele- vance (R)	Quality (Q)	Score	P	x#xQ	ŝcore]
1	Pictu	ire 1								1	Rocks					3	3	.8		0	0	
2	Pictu	nre 2				_	• ·		1											1	1]
3	Up ar	nd dow	n							1	Build	ings			_	5	1	5		2	2]
4	Rock	1								1	Rocks	l				3	5	11		3	3	
5	Land/	water	: inte	rface	:S					1	Coast					5	4	13		4	4	
6	Pictu	ire 3								1	Churc	h				2	1	2		5	5	
7	Picta	ire 4								1	Bay					3	2	6		6	6	
8	Upris	ing								1	Slope	of la	nd			3	1	3		8	7	
9	Clif	2		<u> </u>						1	Coast	;				5	2	9		9	8	
10	Fjore	ls								1	Bay					3	1	3		10	9	
11	Coast	al ci	ty							1	City					5	5	14		12	10	
12													~~~~							15	11	
13									_				-							16	12	
14																				20	13	
15	х.] [25	14	
Sc	ore	0	1	2	3	4	5	6	7		3 9	10	11	12	13	14						
Conce	nte								-								Wei	.ghted	Av	era	ıge	
. conce	pro		4	2	1	1	2	1		1			1		1							

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Table A-5 (continued)

Begin Time: 12:40 Fernando de Noronha Target: Viewer: #002 Method of Targeting: Coordinates End Time: Date: 14 December 1981 Length of Session: Class: Session: Rele-vance Concept Quality D Р PxRxQ Score _ Transcript Concept Element of Target Score Number (R) (Q) Picture 1 Hills Picture 2 Up and down Peak Rocky Coast line Land/water interface **island** EVALUATION Picture 3 Peak Island Picture 4 TRANSCRIPT Uppising Hi**lls** Cliff Peak Inlets Fjords Coastal city 15 | 11 20 13 25 14 Score Weighted Average 2.36 # of Concepts

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Table A-5 (continued)

B	egin Tir	ne:	12:40)				Tar	get:		Punk	aharju					v	iewer: _	#002	2		
E	nd Time:	:						Metl	hod of	Tar	geti	ng:	Coordi	nates		-	D	ate:	14 Dec	cember	1981	
L	ength of	Session	on:					Sess	sion:				1			-	С	lass:	В			
	Concept Number		Ťr	anscr	ipt C	oncept	£		D		Р	Ele	ment o	f Tar	get		Rele- vance (R)	Quality (Q)	Score	PxR _x Q	Score	
	1	Pictu	re 1								0								0	0	0	
	2	Pictu	re 2					• ·	1		0									1	1	
	3	Up an	d dowr	1							1	Town					4	1	4	2	2	
	4	Rocky	·								0								0	3	3	
	5	Land/	water	inte	rface			· · · · ·			1	Connec	ted la	kes			5	4	13	4	4	
	6	Pictu	re 3								0						- /		0	5	5	
	7	Pictu	re 4								1	Connec	ted la	kes			5	2	9	6	6	
	8	Upris	ing								0								0	8	7	
	9	Cliff									0	· <u></u> ,							0	9	8	
	10	Fjord	8								1	Connec	ted 1	kes			5	1	5	10	9	1
	11	Coast	al ci	ty						_	1	Town			<u> </u>		4	3	10	12	10	1
	12																	 	<u> </u>	15	11	4
	13																	 		16	12	
	14																	 		20	13	
	15												ŧ							25	14	J
	S	core	0	1	2	3	4	5	6	7	- 8	9	10	11	12	13	14					
of	f Conc	epts		<u> </u>							+						 	We	ighted	Aver	age	0.9
		- 6 - 5	5	12	1								1			1						

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Table A-5 (continued)

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Begin Ti	me: _	1:	23				1	larget	· · · · ·	Inv	rnes	8 					Viewer: _		#002		
ength o	f Ses	sion:				_	5	essio	n:	arget	ing:_	2	inate				Class:	<u>14 De</u> E	<u>ecembe</u> 3	<u>r 19</u>	81
Concept Number			Trans	script	Conc	ept			D	P	F	lement	of 1	farget		Rele- vance (R)	Quality (Q)	Score	Px	RxQ B	cor
1	PI	cture	1							1	Riv	er ban	k			4	- 3	10		0	0
. 2	St	raight	angl	les			• • •			1	Bui	ldings				5	1	_ 5_		1	1
3	Р	cture	2							1	Riv	er				4	3	_10		2	2
4	Ri	ver					· 			1	Riv	er				5	5	14		3	3
5	Bu	ilding	8						<u> </u>	1	Bui	ldings				5	5	14	┥┝	4	4
6	Ma	n-made								1	Cit	y				5	4	13		5	5
7	Lo	ndon							ļ	1	Cit	у				5	4	13	┤┝	6	6
8	ļ								<u> </u>								<u> </u>		┥┝	8	7
9		-																	┥┝	9	8
10		_	······															<u> </u>	┥┝	0	9
11				<u> </u>					- 		 						-	<u> </u>	┤╎╴	2	10
12	ļ											·							'	.5	11
13			4-1	··											·					.6	12
14			<u> </u>															<u> </u>	-	:0	13
15									[<u>.</u>								5	14
Sco	ore	0	1	2	3	4	5	6	7	8⁺	9	10	11	12	13	14	.	<u> </u>	A =		
Concer	nts																Weig	nted	Aver	age	

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Table A-5 (continued)

15:23 Hangö Viewer: Begin Time: Target: #002 Method of Targeting: Coordinate Date: 14 December 1981 End Time: Length of Session: Session: Class: B Rele-Vance Concept Quality D P PXRXQ SCOTE Transcript Concept Element of Target Score Number (R) (Q) Picture 1 **Buildings** Straight angles Buildings ... Picture 2 Peninsula River Bay Buildings Buildings EVALUATION Man-made Buildings London Town TRANSCRIPT Score Weighted Average 2.72 # of Concepts

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Approved For Release Holdel A SSIFRED 6-00788R001800080001-5

Table A-5 (continued)

Concept Number 1 Pictur 2 Straig 3 Pictur 4 River 5 Build 6 Man-ma 7 London 8 9 10 11 12 13 14	Transcrip ture 1 aight angles ture 2 er ldings -made don	pt Conce	•pt		D	P 0 1 1 0 0 0	Isla Ocea	and an	of Targ	et	Rele- vance (R) 5 3	Quality (Q)	8core 0 0 5 3 0 0 0 0 0 0	Px8xQ 0 1 2 3 4 5 6	0 1 2 3 4 5 6
1 Picture 2 Strain 3 Picture 4 River 4 River 5 Build: 6 Man-me 7 London 11 12 13 14	ture 1 aight angles ture 2 er Idings -made don					0 0 1 1 0 0 0	Isla	and			5	1	0 0 5 3 0 0 0	0 1 2 3 4 5 6	0 1 2 3 4 5 6
2 Strain 3 Pictur 4 River 5 Build 6 Man-me 7 Londor 14	aight angles ture 2 er ldings -made don					0 1 0 0	Isla	and an			5	1	0 5 3 0 0 0	1 2 3 4 5 6	1 2 3 4 5 6
3 Picture 4 River 5 Build 6 Man-max 7 London 8 9 9 10 11 12 13 14	ture 2 er ldings -made don					1 0 0	Isl: Ocer	and			3	1	5 3 0 0	2 3 4 5 6	2 3 4 5 6
4 River 5 Build 6 Man-mail 7 London 8 9 9 10 11 12 13 14	er ldings -made don					1 0 0	Oces	an			3	1	3 0 0	3 4 5 6	3 4 5 6
5 Build 6 Man-ma 7 Londor 8 9 10 11 12 13 14	ldings -made don					0							0 0 0	4 5 6	4 5 6
6 Man-ma 7 London 8	-made don					0		.1					0	5	5
7 London 8 - 9 - 10 - 11 - 12 - 13 - 14 -	don					0							0	6	6
A 8 9 10 11 12 13 14	<u>e</u>				_			 							
9 10 11 12 13 14		,	<u></u>		ł	1									7
10 11 12 13 14							∦						ļ	9	8
11 12 13 14						<u> </u>	ļ				<u> </u>	ļ		10	9
12 13 14						 				- <u></u>	<u> </u>			12	10
13						 						 		15	11
14					_	 					_	<u> </u>	<u> </u>	16	12
		<u></u>								····		l		20	13
15														25	14
Score	0 1	2 3	4	5	6	7	8 9	10	11	12 1	3 14				
<pre># of Concepts</pre>		<u> </u>		$\left \right\rangle$	-+						+	We	ighted	l Aver	age
l							,L	_1	<u> </u>						

and the second second

Beg	in Ti	me:	:23					Targ	et:	Pu	nkaha	ırju				-	Vi	ewer: _	#002			
End Len	Time:	Session	n:					Meth Sess	od of ion:	Targe	eting	: <u>(</u> 2	Coordin	nate		-	Da Cl	ite:	14 Decemb	er 19	81	
Co M	oncept umber		Tra	nscri	pt Co	ncept			D	P		Elem	ent of	Targ	et	- R V	ele- ance (R)	Quality (Q)	Score	PxR _X Q	Score	
	1	Picture	1							1	1	Bridge					2	1	2	0	0	
	2	Straigh	it ang	les				<i></i>		1		Bridge					2	1	2	1	1	
	3	Picture	2				**			1		Bridge					2	1	2	2	2	I
	4	River								1		akes					5	2	9	3	3	
	5	Buildin	gs							1		lown					4	5	13	4	4	
	6	Man-mad	le							1		<u>rown</u>					4	4	12	5	5	
	7	London								1		ľown					4	3	10	6	6	
	8																			8	7	
	9				_															9	8	
	10								_								1			10	9	
	11								_											12	10	
	12							-												15	11	
	13																			16	12	
	14																			20	13	
	15				-															25	14	
		Score	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14					
. f	6		<u>ا</u>	<u> -</u>								<u> </u>						W	eighted	Ave	rage	
of	Con	cepts		3	1	1	1	1				1	1		1	1			······			

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Approved For Release 2000/08/08 : CIA-RDP96-00788R001800080001-5

Approved For Release JANGE AS SIA HEB 6-00788R001800080001-5

Table A-5 (continued)

egin Time		13:13				Tg	irget		Inv	erness					v	iewer: _	#002		
nd Time: ength of	Session:					Me Se	thod ssion	of Ta	arget	ing:	Coord 3	linate	8		D C	ate:	14 Dece B	mber 1	981
Concept Number		franso	cript	Conce	pt			D	Р	El	ement	of Tr	irget		Rele- vance (R)	Quality (Q)	Score	PxR	Q Score
1	Picture	1							1	Buil	dings				5	1	5.	0	0
2	Land/wat	er in	terfa	ce					1	Rive	F		_		4	4	12	1	1
3	Ridges								0				<u></u>				0	2	2
4	Small up	s and	down	s					1	Buil	dings				5	1	5	3	3
5	Cold								1	Loca	tion				3	1	3	4	4
6	Picture	2			-				1	Chur	ch				2	1	2	. 5	5
7	Rocky								0								0	e	6
8	Picture	3							1	Buil	dings				5	1	5	8	7
9	Picture	4							0								0	9	8
10	Frozen								0								0	10	9
11	Feeling	of to	wn		·				1	City	·				5	4	13	12	10
12	Cliff on	wate	r		_				1	Rive	er banl	<u>د</u>			1	1	1	1	11
13															ļ	<u> </u>		10	12
14										ļ								20	13
15																		2	14
Sco	re 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	·	1		
Concep	ts 4	6		$\frac{1}{1}$	2	3			+	+			1	1		Wei	ghted	Aver	age

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Approved For Release LINGLASSIA STATE B6-00788R001800080001-5

Table A-5 (continued)

	1 0055					-	50	SSIO				3			<u> </u>	C	lass:	В		
Concept Number		T	ransc	ript	Conce	pt			D	Р	El	ement	of Ta	rget		Rele- vance (R)	Quality (Q)	Score	PxRxQ	Score
1	Pic	ture	5 1							1	Rock	8				3	2	6.	0	0
2	Lan	d/wate	er in	terfac	e					1	Peni	nsula				5	4	13	1	1
3	Rid	ges				*	•			1	Rock	8				3	2	6	2	2
4	Sma	11 up:	s and	downs	3					1	Rock	8				3	2	6	3	3
5	C 01	d								1	Loca	tion	<u></u>			4	4	12	4	4
6	Pic	ture :	2							1	Chur	ch				2	1	2	5	5
7	Roc	ky								1	Rock	S			<u></u>	3	5	11	6	6
8	Pic	ture	3							1	Slop	ing ro	cks			3	2	6	8	7
9	Pic	ture	4							0						<u> </u>		0	9	8
10	Fro	zen								1	Loca	tion				4	4	12	10	9
11	Fee	ling	of to	m						1	Town	1 [.]				5	5	14	12	10
12	C1 i	ff on	wate	r						1	Slop	ing ro	ocks			3	2	6	15	11
13												<u>`</u>						<u> </u>	16	12
14																			20	13
15																			25	14
Se	core	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14				
~										+	+					┝───│	Wei	ghted	Aver	ige

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Approved For Release 2000/08/08 : CIA-RDP96-00788R001800080001-5

Approved For Release 400 480 54 6 60 96-00788 R001800080001-5

Table A-5 (continued)

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Begin	Time:	1	3:13					Target	t:	F	ernan	do de	Noron	ha			V1	ewer: _	#002			
ind Ti	me:							Method	i of f	large	ting:		Coor	dinat	es		Da	te:	14 Decemi	ber 19	81	
ength	of S	ession:	·		·			Sessio	m: _			3					Cla	ass:	В			<u> </u>
Concep Number	pt r		Tran	scrip	ot Con	cept			D	P		Bleme	ent of	Targe	ət	Re] VE! (1	e- ice 2)	Quality (Q)	Score	PxRx	Score	pi o
1	P	licture	1							1	Hi	118				4	1	2	7	0	0	
2	L	and/wa	ter i	nterf	ace					1	Is	land					5	4	13	1	1	<u>c</u>
3	R	idges					<u>.</u>			1	Hi	115					1	5	13	2	2	
4	s	mall u	ps an	d dow	ns	~				1	Hi	118					1	3	12	3	3	
5	c	201d						-		0									0	4	4	5 1
6	F	victure	2							1	Pe	ak					3	3	8	5	5	
7	R	locky								1	Sh	oreli	ne				3	2	6	6	6	
8	F	licture	3							1	Hi	115					1	3	10	8	7	
9	F	loture	4							1	Su	ırf					3	1	3	9	8	(
10	F	rozen								0									0	10	9	
11	F	eeling	of t	own						0									0	12	10	
12		liff o	n wat	er						1	Hi	lls b	у веа				4	5	13	15	11	
13																				16	12	-
14																				20	13	
15																				25	14	
	ę.,		0	1	2	2	4	5	6	7	8	9	10	11	12	13	14					
	30	ore	-			ļ						*			16			۲	leighte	d Av	erage	2.49
of C	once	pts	3	1	2	3	1	2	1	1	1		2		3]						

Table A-5 (continued)

Approved For Release 2000/08/08 : CIA-RDP96-00788R001800080001-5

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Begin Ti	me:	13:	13			-	Tas	rget;		Pu	nkha	iraja					Ŷ	iewer: _	#	002	<u></u>	
and Time	:					-	Met	thod	of T	arget	ing	•	Coord	inate	8		D	ate:	14 Dece	mber	1981	
length o	f Sessi	on:				•	Sea	ssion	:			3	·				c	lass:	B			
Concept Number		Tı	ransci	ript C	Concep	t			D	P		Ble	ment	of Ta	rget		Rele- vance (R)	Quality (Q)	Score	PxR	xQ 8001	
1	Pictu	ure 1								1	5	Scatt	ered 1	akes			5	1	5		0	
2	Land,	water	inte	rface						1	5	Scatt	ered 1	akes			5	4	13	1	1	
3	Ridge	8								1	1	slan	ds				4	2	7	<u> </u> ;	2	
4	Smal 1	ups	and d	lowns						1	1	[slan	ds				4	4	12		3	
5	Co1d									1	I	ocat	ion				4	4	12		4	
6	Pictu	ire 2			·					1		slan	18				4	1	4		5 5	
7	Rock	7			·					0									0		3 6	
8	Pict	ire 3				, <u> </u>				1	<u> </u>	slan	ds				4	1	4		3 7	
9	Pict	ire 4								0		<u></u>					 	<u> </u>	0		3 8	
10	Froz	en								1	1	ocat	ion				4	4	12	1	9	
11	Feel	ing of	town	۱ 						1	1	lown					4	5	13	1	2 10	
12	Clif:	f on w	ater				<u>.</u>			0	∥			·				 	0	1	5 11	
13											∥			·				 		1	6 12	
14																<u></u>				2	0 13	-
15																·····		Į		2	5 14	
S	core	0	1	2	3	4	5	6		7	8	9	10	11	12	13	14					
Conc	ente	-		<u> </u>					+	+-							<u> </u>	We	ighted	Ave	rage	Ι
L CONC	chra	3	3	1		4	1		1				L		3	2		·				-

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Table A-5 (continued)

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Dep	51N 718	HG :						TRT:	Ret: "						linates			۷ n	iewer: _	#U			
Let	ngth of	Sessio	n:					Ses	noa on sion:		urget	.1 ng	4	0010	inates			c	ate: lass:	B	ember]	.981	
0	oncept. tumber		Tr	anscr	ipt C	oncept	t			D	P		Blei	ment	t of Ta	rget		Rele- vance (R)	Quality (Q)	Score	PxRx	BCOT	·]
	1	Down j	agged	1							0						ŀ			0	0	0	
	2	Pictur	e 1								1		Slopin	ng t	oank			2	1	2	1	1	
	3	Flat						•-			1		Area					4	3	10	2	2	
	4	Water									1		River					4	4	12	3	3	
	5	Green									1		Grass			···· —		1	3	3	4	4	
	6	Pictur	e 2							\square	1		River	bar	iks			2	1	2	5	5	
	7	Down/u	p								0									0	6	6	
	8	Deep v	alley	r							0									0	8	7	
	9	Pictur	ê 3						2	2											9	8	
	10	Down									1		Banks					2	1	2	10	9	
	11	Land/w	ater	inter	faces						1		River					4	4	12	12	10	
	12	Descen	di ng			·					1		Banks					2	1	2	15	11	
	13	Trees									1		Trees					2	5	9	16	12	
	14	Windin	g riv	er							1		River					4	5	13	20	13	
	15	Jungle	•					···			1		Trees					2	1	2	25	14	
	S	core	0	1	2	3	4	5	6	7	7	8	9.	1	0 11	12	13	14	,				-
of	Conc	epts	3	5	2	2	2	2			+		1	1		2	1		We	ighte	d Ave:	rage	
			L	L	L	I	L	l		L				L		- <u></u>	L	أستحصيه					

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Begin Ti	me:	12:	46			-	Tat	rget :			Hangö					v	iewer:	i	#002		
End Time	:					-	Net	thod	of T	arget	ing:	Coo	rdina	tes		D	ate:	14 De	cember	1981	
Length o	f Sessi	on: _				-	Ses	ssion	:			4			_	С	lass:	В	<u></u>		
Concept Rumber		T	ransc	ript (Conce	ot			D	P	El	ement	of Ta	rget		Rele- vance (R)	Quality (Q)	Score	PxRxQ	Score	
1	Down	jagge	ed							1	Slop	ing ro	cks			3	2	6	0	0	
2	Pictu	ire 1								1	Slor	ing ro	cks			3	2	6	1	1	
3	Flat		-							1	Bay					3	1	3	2	2	
4	Water									1	Bay					3	4	10	3	3	
5	Green	1								0						-		0	4	4	ı
6	Pictu	re 2								1	Slop	ing ro	cks			3	1	3	5	5	
7	Down/	'up								0								0	6	6	
8	Deep	valle	y							0							ll	_0	8	7	i
9	Pictu	ire 3							2										9	8	
10	Down									1	S1or	ing ro	cks			3	1_1	3	10	9	
11	Land/	water	inte	rface	S					1	Peni	nsula				5	4	13	12	10	
12	Desce	ending								1	Slop	ing ro	cks			3	1	3	15	11	
13	Trees	1								1	Tree	<u> </u>				2	4	7	16	12	
14	Windi	ng ri	ver							1	Bay					3	1	3	20	13	
15	Jungl	.e					1			1	Tree	s				2	3	6	25	14	ļ
Se	core	0	1	2	3	4	5	6	7		3 9	10	11	12	13	14					
Conce	ents	-	-	<u> </u>					+-	+	•	<u> </u>					Wei	.ghted	Avera	age	1.
	-pes	3	5	2	1	3		3													

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Table A-5 (continued)

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Approved For Release 2000/08/08 : CIA-RDP96-00788R001800080001-5

Approved For Release Nochas State 96-00788R001800080001-5

Er	nd Time:						-	Met	hod o	of Ta	arget	ing:	Coordi	nates	1		D	ate:	14 Dece	ember 1	981	
	Concept Number	Sess10	on: Tr	anscr	nipt C	oncep	t	Ses	sion:	D	Р	Ele	ement c	of Ta	rget	-	Rele- vance (R)	Quality	B	PxRxQ	Score]
	1	Down	jagge	eđ	·						1	Hills					4	3	10	0	0	
	2	Pict	ure 1								1	Hills					4	4	12	1	1	1
	3	Flat									0								0	2	2]
	4	Wate	r								1	Ocean					4	4	12	3	3	
	5	Gree	n							_	1	Vegeta	tion				2	3	6	4	4	
	6	Picta	ure 2								1	Hills					4	1	4	5	5	
	7	Down,	/up								1	Hills			·		4	1	4	6	6	
	8	Deep	valle	ey							0							ļ	0	8	7	
	9	Pict	ure 3							2								 		9	8	
	10	Down									1	Slopin	g hill	8			4	1	4	10	9	
	11	Land,	/wate1	r inte	erface	98					1	Island	1				_5	4	13	12	10	
	12	Desc	ending	g							1	Slopin	ng hill	s			4	1	4	15	11	
	13	Tree	s					····			1	Vegeta	tion		···		_2	5	9	16	12	
	14	Wind	ing ri	iver							1	Ocean					4	2	7	20	13	
	15	Jung	1e								1	Vegeta	tion				2	5	9	25	14	
	So	core	0	1	2	3	4	5	6	7	7 8	3 9	10	11	12	13	14					
of	Conce	epts	2	6	 	2	2	2	1	+	+		1		2	 1		We	ighted	Aver	age	2.
			<u> </u>	L *	1_ <u>+</u>	<u> </u>		<u> </u>	I <u>+</u>	1	I					<u>1 </u>	Ld					
								Т	ab1e	e A-	-5 (contin	ued)									

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Approved For Release 2000/08/08 : CIA-RDP96-00788R001800080001 UNCLASSIFIED

length o	f Ses	sion:					5	Sessio	m:			4				c	lass:	В		
Concept Number			Trans	script	: Conc	ept			D	Р	E	lement	t of	Target	:	Rele- vance (R)	Quality (Q)	Score	PxRxQ	800
1	Dow	n jag	ged							0								0	0	0
2	Pic	ture	1			· 				1	Is	lands		<u>.</u>		4	3	10	1	1
3	Flat				-		<u> </u>	1	Area				4	3	10	2	2			
4	Water							<u> </u>	1	Lakes				5	4	13	3	3		
5	Gre	en							ļ	0						_ <u>_</u>	<u> </u>	0	4	
6	Plo	ture	2						<u> </u>	1	Lal	ke bot	toms			5	1	5	5	5
7	Dow	n/up								1	Lal	ke bot	toms			5	1	5	6	6
8	Deep valley							1	Lake bottoms				5	1	5	8	2			
9	Pic	ture	3						2							_	<u> </u>		9	8
10	Down								1	Lake bottoms				5	1	5	10	8		
11	Land/water interfaces								1	Lakes				5	4	13	12	10		
12	Descending							1	Islands				4	1	4	15	11			
13	Trees							1	Trees				2	4	7	16	12			
. 14	Winding river						1	Connected lakes				5	2	9	20	13				
15	Jungle				<u>-</u>		1	Tr	Trees				2	1	2	25	14			
Sco	re	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14				
-										<u> </u>							Weig	hted A	lverag	;e

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Table A-5 (concluded)

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(U) Two types of overall assessment were chosen to emphasize the versatility of the evaluation procedure, (1) a simple rank ordering based on weighted average scores, and (2) a concept-by-concept, non-parametric, statistical technique. Table A-6 shows the results of the first method, the rank ordering. For convenience, the correct matches are underlined.

Table A-6

Session/Target	Inverness	Hangö	Fernando de Noronha	Punkaharju
2	4.13*	2.72	0.22	2.11
3	1.12	2.65	2.49	2.42
4	1.21	1.38	2.22	2.21
1	1.53	2.52	2.36	0.90

(U) A RANK ORDERING OF WEIGHTED AVERAGES (U)

 $\tilde{}$ Scores computed with non-uniform target relevance factors.

(U) From Table A-6, we see that there were 3 first-place matches and 1 fourth-place match. The probability of obtaining 3 of 4 possible first-place matches, from chance fluctuations alone are less than 0.051. The point spread between the best match (Inverness) and the worst match (Punkaharju) are in qualitative agreement with a subjective "first look" at the quality of the transcripts as well.

(U) The second analysis determines the significance of the difference between the correct concept/target matches and a control set of matches. All concept/target matches that are not the correct matches act as an internal control set. To avoid any invalid assumptions as to the correct parent distribution, a non-parametric statistical test, the Mann-Whitney U-Test, was chosen for the analysis.⁴

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(U) It is beyond the scope of this report to review the details of the Mann-Witney U-Test; thus, only the results are quoted here. The probability that the set of correct concept/target matches is statistically indistinguishable from the control concept/target matches is less than 0.071.

(U) There are a number of additional statistical procedures that could be used to analyze the results of this evaluation technique. The two cited above, however, represent a spread in complexity that demonstrates the internal consistency of the basic evaluation procedure. With only four similar RV sessions, the evaluation technique nearly reached the 0.05 level of statistical significance with each of the two statistical procedures, a result indicating a successful outcome with regard to the overall assessment procedure.

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Appendix B

(U) SUMMARY OF EVALUATION TECHNIQUE (U)

Step	Action							
1	Task coordinator defines the evaluation goal. He/she identifies target elements and assigns target element relevance factors as appropriate.							
2	Analyst conceptualizes responses and prepares an RV assessment sheet for each response.							
3	Repeated concepts are noted in the "D" column.							
4	Copies of the sheets from Item 2 are made; one for each possible target used in the analysis.							
	FOR EACH POSSIBLE RESPONSE/TARGET COMBINATION:							
5	Identify a target element for each concept not marked in the "D" column; mark a 1 in the "p" column and write the target element and its relevance factor from Step 1 in the appropriate columns. (Write 0 and blanks if no element can be found.)							
6	Using Table 3, assign a quality rating for all present $(p = 1)$ concept/element combinations.							
7	Compute the score as follows:							
	a. Calculate relevance (R) X quality (Q)							
	b. Convert R X Q to an integer between 0 and 14 using the conversion table provided.							
8	Enter the number of concepts that obtained each possible score in the space provided.							
9	Calculate the weighted average using:							
	$A_{k} = 0.357 \left[\Sigma f_{j} \sqrt{f_{j}} S_{j} / \Sigma f_{j} \sqrt{f_{j}} \right]$							
	where: S, is the score and f, is the number of concepts that obtained score							
	$j = 0, 1, 2, \ldots, 14$							
10	For each response, rank order the weighted averages.							

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REFERENCES (U)

- H. E. Puthoff and R. Targ, "A Perceptual Channel for Information Transfer over Kilometer Distances: Historical Perspective and Recent Research," Proc. IEEE, Vol. 64, No. 3, pp. 329-354 (March 1976).
- C. Scott, "On the Evaluation of Verbal Material in Parapsychology: A Discussion of Dr. Pratt's Monograph," J. Soc. Psych. Res., Vol. 46, No. 752, pp. 79-90 (June 1972).
- 3. R. Targ, H. E. Puthoff, and E. C. May, "State of the Art in Remote Viewing Studies at SRI," Technical Session on Research in Psychoenergetics, <u>Proc. 1977 IEEE International Conf. on Cybernetics and</u> <u>Society</u>, Washington, D.C. (September 20, 1977).

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4. S. Siegel, Nonparametric Statistics, pp. 116-120 (McGraww-Hill, 1956).