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IV LONG-DISTANCE REMOTE VIEWING FROM A SUBMERSIBLE

In July of 1977 SRI carried out experiments in remote viewing from a submersible submerged in 500 ft of sea water, approximately 500 miles from the target site.

The goal of the experiment was to determine whether it was possible to transmit a message to a submerged submarine via the remote-viewing channel. The test was designed to provide not only an opportunity to determine the feasibility of psychoenergetic communication with an isolated individual, but also to provide data on the effects of environmental stress on psychoenergetic performance, and on the possible shielding effects of several hundred feet of sea water (known to be a good shield for all but the lowest frequencies of the electromagnetic spectrum). Neither the stress, nor distance, nor seawater attenuation appeared to degrade the quality of the remote-viewing function in any way.

The submersible used in the experiment was the Taurus, a five-man underwater vehicle (see Figure 10) manufactured by International Hydrodynamics Company Ltd. (HYCO) of Canada. (The Taurus was made available to SRI by Mr. Stephan Schwartz of the Philosophical Research Society of Los Angeles, who had arranged for its use in an underwater archaeology experiment.) During the experimentation discussed here, the submersible operated submerged in the waters near Santa Catalina Island, off the coast of southern California.

A. Communication Experiment

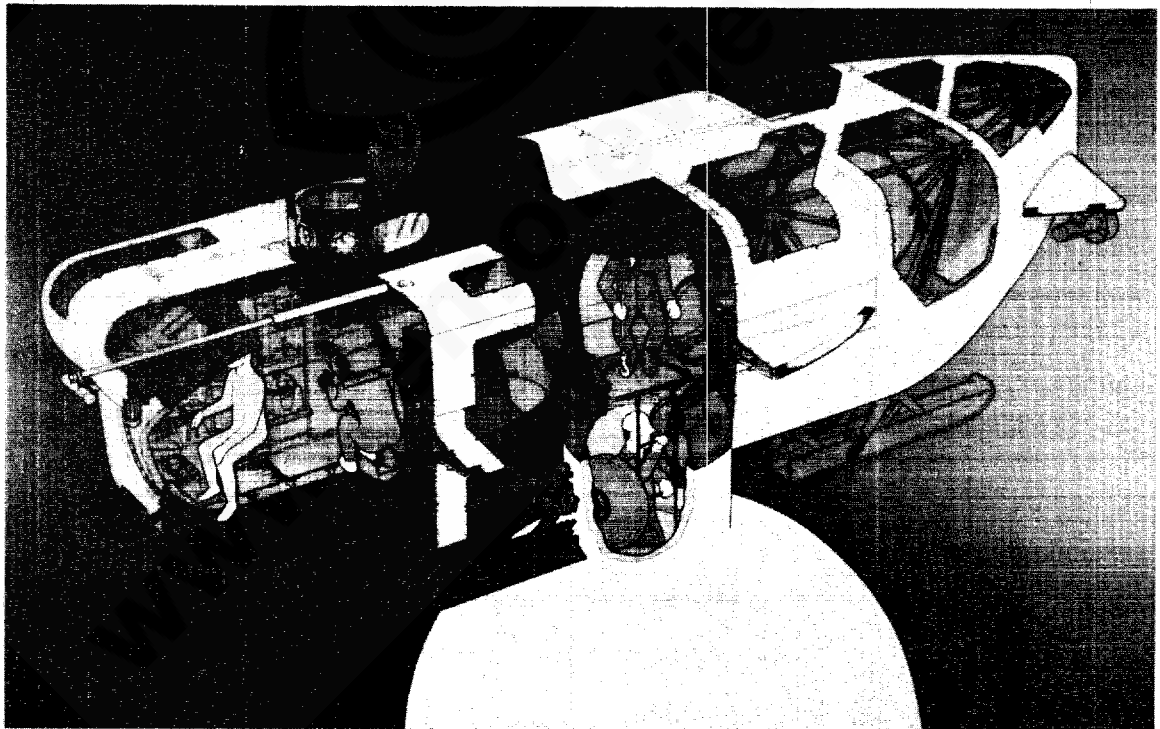
The protocol for the experiment was as follows. A series of six potential messages to be sent [see Table 4 in the Executive Summary (Section II)] was constructed in advance of the experiment. To each message was assigned a target location in the San Francisco Bay Area. To send a given message, a target demarcation team went at a prearranged

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(a) PHOTOGRAPH (U)



(b) SECTIONAL VIEW (U)

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FIGURE 10 SUBMERSIBLE TAURUS (U)

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time to the site linked to the particular message and remained there for 15 minutes. During this period a subject on-board the submersible, monitored by an investigator blind to the target pool, registered his impressions as to where the demarcation team was, 500 miles away, as per standard remote viewing protocol. Following the remote-viewing trial, the subject then consulted a list of potential targets (seen for the first time at this point), made a choice as to which target of the set was viewed, and noted the associated message.

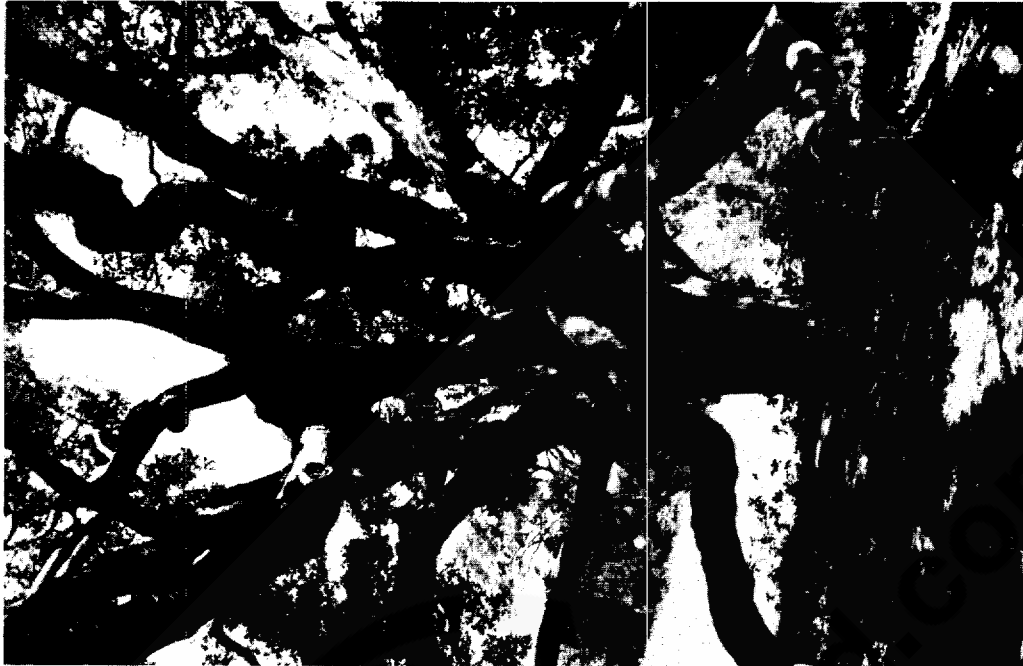
Four trials were planned in accordance with a prearranged time schedule. The first trial was aborted because the submersible did not follow its diving schedule. For the second trial the submersible was at a depth of 170 m, in water 340 m deep, and the subject was asked to describe his impressions of the location of the outbound team. (The outbound team had chosen their location to designate the particular message to be sent.) Having completed the response, the subject was handed the list of target descriptions and asked to choose which of the six target locations appeared to match the description.

Figure 11 shows the subject's response. The outbound team had chosen the large oak tree shown in the figure. (An interesting note: Because of a timing error the subject's narrative began while the outbound team was still enroute to the target site.) The subject correctly (and extensively) described a large tree, and also correctly described a drop-off behind the outbound team. In this experiment the subject was able to identify the correct target on the list and was thus able to obtain the associated correct message, "Rendezvous at Pickup Point Three."

The third trial aborted because of a lack of synchronization between submarine dives and target visitation. For the fourth trial, the outbound team again went at a prearranged time to one of six possible locations, chosen from a new list, a shopping mall shown in Figure 12. In this trial the submersible rested on the bottom in 78 meters of water. Figure 13 shows the subject's response to the target. The subject correctly indicated the flat stone flooring, small pool, reddish stone

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FIGURE 11 SUBMERSIBLE EXPERIMENT NUMBER 1: 170 m DEEP IN 340 m OF WATER. 16 July 1977. Target was a giant oak on a hilltop in Portola Valley, California. Subject's first words were: "A very tall looming object. A very, very, huge tall tree and a lot of space behind them. There almost feels like there is a drop-off or a palisade or a cliff behind them." (U)

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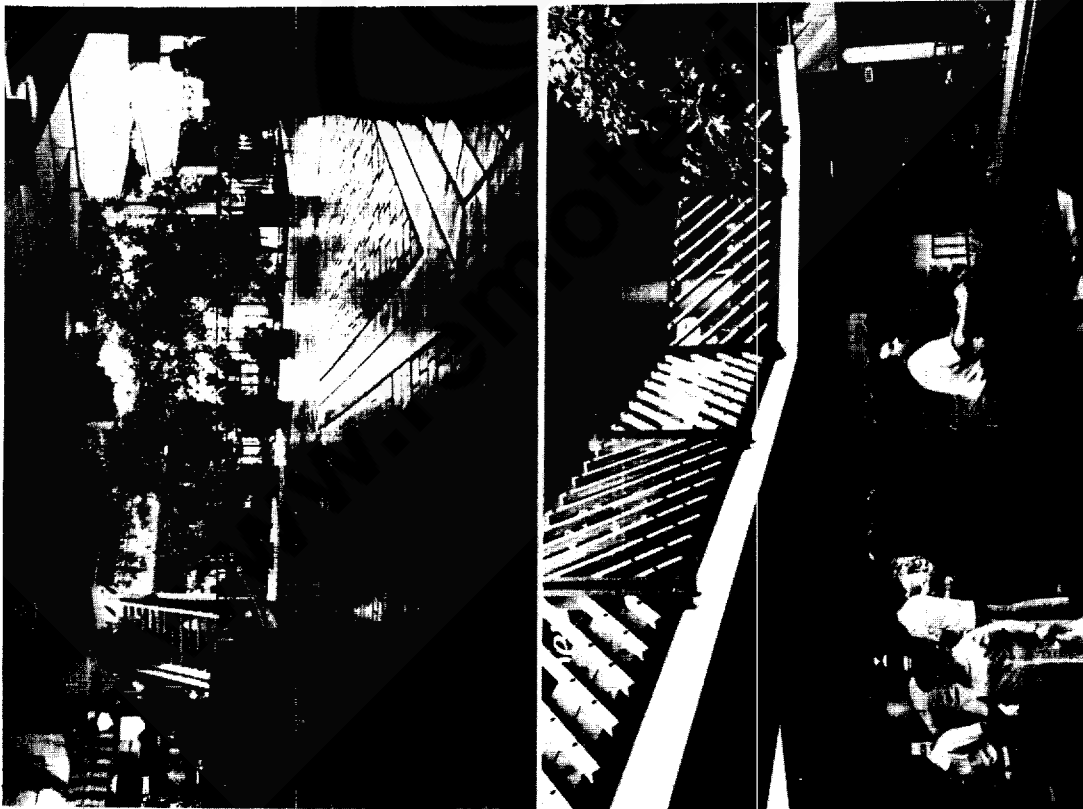


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FIGURE 12 SHOPPING MALL TARGET USED IN SUBMERSIBLE EXPERIMENT NUMBER 2 (U)

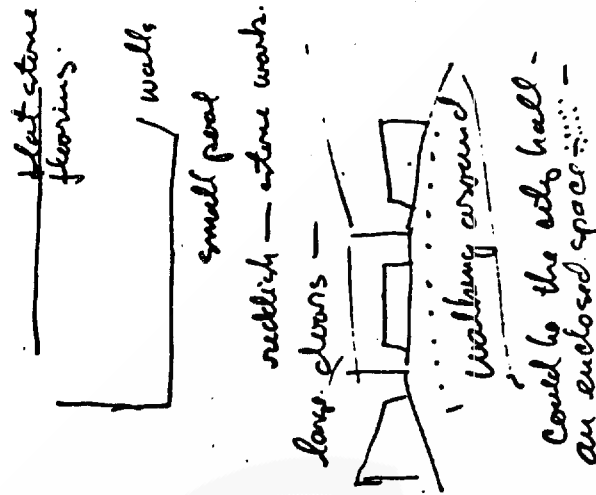
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FIGURE 13 SUBMERSIBLE EXPERIMENT NUMBER 2: 78 m DEEP ON THE BOTTOM. Target was shopping mall in Mountain View, California. Subject's drawing correctly identifies: "Flat stone flooring, walls, small pool, reddish stone walk, large doors, walking around, an enclosed space." (U)



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walk, and people walking around in an enclosed space. When shown the target list, the subject chose the correct target location and was thus able to "receive" the associated message.

Therefore, in the two trials that were actually carried out from the submersible, the subject in each case selected the correct one out of six messages.

B. Examination of the ELF Hypothesis

One of our purposes in experimenting with remote viewing from a submersible was to test the extremely-low-frequency (ELF) electromagnetic hypothesis put forward by I. M. Kogan of the Soviet Union, who suggests that information transfer under conditions of sensory shielding is mediated by ELF waves with wavelengths in the 300-to-1000-km region.²⁰⁻²³

To determine the significance of the success of the communications experiment with regard to the ELF hypothesis, we must examine the shielding effect of 170 m of sea water. The appropriate calculations have been carried out by the authors for another project; we quote the salient features here.

Three modes of propagation have to be considered. They are the TE, TM, and quasi-TEM modes of propagation. (The latter is generally assumed in Project Sanguine/Seafarer calculations, where one considers coupling into the spherical resonant cavity comprised of the earth's surface as the inner radius, and the ionosphere as the outer radius.²⁴) Table 6 shows the minimum attenuation results for the three cases, assuming a depth of 170 m and a frequency of 10 Hz (approximate brainwave frequency). We see that in all cases there is greater than 20 dB (factor of 100) attenuation of a 10-Hz ELF signal.

C. Preliminary Conclusions

Preliminary conclusions of the submersible experiment are as follows:

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Table 6

SUBMARINE EXPERIMENT
(ELF Hypothesis)

Depth: 170 m	
Maximum-Transmission TE Wave (Normal Incidence, 10 Hz)	
$R_{\text{surface loss}}$	44.8 dB
R_{attn}	<u>18.6 dB</u>
Total	63.4 dB
Maximum-Transmission TM Wave (Grazing Incidence, 10 Hz)	
$R_{\text{surface loss}}$	3.4 dB
R_{attn}	<u>18.6 dB</u>
Total	22.0 dB
Maximum-Transmission Quasi-TEM Wave (Grazing Incidence, 10 Hz)	
$R_{\text{surface loss}}$	50.3 dB
R_{attn}	<u>18.6 dB</u>
Total	68.9 dB

- Remote viewing appears to be a successful approach for achieving a land/submersible communication link.
- Under the least-loss case (near-grazing TM wave), the attenuation for an ELF signal at 10 Hz is 18.6 dB at 170 m, to which must be added the air/surface reflection loss. (The air/surface interface adds another 3.4 dB.) The results are therefore suggestive that the postulated ELF electromagnetic radiation mechanism is not viable as a mechanism for remote viewing. However, a definitive test requires a series

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of experiments carried out at, say, 1000 m, where 10-Hz attenuation reaches 110 dB.

- Although the subjects indicated that they had experienced some degree of stress due to cramped conditions and seasickness, these environmental factors did not appear to affect the quality of performance deleteriously.

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