Discovery

FROM: OFFICE OF THE PRESIDENT_ HQ
TO: Prof. Anton Van den Brook, Mariana Marine Colony, CERN Annex

SUBJECT: NOTICE OF APPOINTMENT WITHOUT COMPETITION – SPECIAL SCIENTIFIC ADVISOR

Professor Van den Brook,

The purpose of this email is to confirm your recent verbal appointment as Special Scientific Advisor by President *Inayik*. The President will communicate with you as necessary to entrust you with work or consult you on matters within your field of expertise. Please reply to the following address [REDACTED EMAIL ADDRESS] making sure to mention the above position title and your permanent identification number.

The Directorate congratulates you on this honorable appointment and hopes that your cooperation will be long and fruitful.

Regards,

Bao Zhang
Private Secretary to President *Inayik*

The professor, after reading this e-mail, found that it was quite timely. "I will start by conducting the planned exploration. Thus, I will be able to combine a description of its result and of the success we have had in the production of metallic hydrogen", he mused. "Too bad I was assigned a time slot at the end of the day, but this was to be expected, since the ROV is used for priority missions by other services. Given the present working climate among the staff, it would not have been a good idea for me to use managerial prerogatives to deviate from current priorities to verify mere intuitions."

Shortly after the meal break, a technician came to his desk to brief him on how to use the vehicle. "Good afternoon, Sir," he said. Have you ever used this type of remotely operated vehicle?"

"On a few occasions, the professor replied, but never at such great depth."

"Don't worry, said the technician. This ROV is fully programmed and features artificial intelligence designed to cover most situations that may arise. Everything is filmed on digital video cameras and there are various user-friendly menus for close-ups and sample collection. The headlights are steerable and can be adjusted to any desired frequency or intensity range of lighting or switched off if necessary to film bioluminescent specimens. It looks a lot like a video game. The AI can take over if necessary and always knows the relative position of the ROV and of the cable that connects it to the dome. It can also disengage itself from it, if stuck somewhere, and go back to the habitat to be recovered or repaired. Good exploration, Sir!"

"Thanks! and good day to you," replied the professor.

At the appointed time, the professor settled in front of his terminal and opened a session with the control system of the underwater dome. As soon as he had identified himself, the computer responded by displaying the ROV control screen. "Good evening, Professor Van den Brook! Scheduled exploration session being loaded: Press the prompt when it appears and select the desired options from the Main Menu."

The professor chose "Summary research and/or observation of extremophile flora or fauna on the edge of the Trench", then initiated the program. The system responded "Program saved. Unspecified coordinates –Manual operation active. Filling of the airlock and opening of the ocean gates in progress. The ROV will automatically perform exit procedures and assess its immediate environment, after which steering will be transferred to the user."

While the program was running, the professor took the opportunity to watch the live video feed and the outside view of the dome while waiting for the ROV to pass the controls to him. Suddenly, the headlights seemed to go out… Ah! It immediately switched to red light, he thought (this wavelength is more conducive to in-depth research and aims at avoiding to scare away potential photosensitive observation subjects). The professor looked at the control screen to determine the ROV's position and headed towards the Trench, a little on the left of the dome.

As the ROV was about to move ahead into the slope leading to the Trench an alert signal sounded and the system displayed the following message: "Abnormal stress detected in the cable: emergency shutdown and boot of the troubleshooting program."

The ROV slowed down markedly and initiated a nose-down descent followed by a barrel roll that put it on its back, then flipped upside again and moved slowly back on its track with full headlights and normal lighting.

The cable was quickly located, stuck in a rock crevice. The ROV positioned itself vertically right above the spot and slowly rewound the cable until it was freed. It scanned the ground and moved aside a little to avoid the cavity, then resumed its previous heading and stopped while flashing the following display "Cable cleared: back to manual mode and exploration lighting."

"Not bad at all, says the professor. This technology is far superior to anything I've experienced before. In any case, this will save both my reputation and precious time. Let's go for the descent. If I remember correctly, the phenomenon in the dream was emanating some twenty meters below, on the side of the Trench."

The ROV moved down at reduced speed and the professor soon observed a faint pulsating bluish glimmer on the nearly vertical rock wall. "Who would have believed it", he said. However, there is no detectable activity for now. I will have a robotic observation post installed later, but I have just enough time to record a short video and collect a few samples (he selects the desired options, then programs the return to the dome).

Upon re-entering the airlock, he instructs the system to transfer a copy of the video to his workstation and forward the sample to the lab at the next scheduled transport, then ends the session, once the VT is back in its niche.

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