

Report



ON EVALUATION OF GMDSS COMMUNICATION COURSES AT NAMFI

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Introduction

In 1979, a group of experts met in Hamburg, Germany and drafted the International Convention on Maritime Search and Rescue, which called for development of a global search and rescue plan. This group also passed a resolution calling for development of a Global Maritime Distress and Safety System (GMDSS) by International Maritime Organisation (IMO) to provide the communication support needed to implement the search and rescue plan.

This new system, which the world's maritime nations are implementing, is based upon a combination of satellite and terrestrial radio services, and has changed international distress communications from being primarily ship-to-ship-based to ship-to-shore-based.

The GMDSS provides for automatic distress alerting in cases where a radio operator does not have time to send an SOS or MAYDAY call, and, for the first time, made it a requirement for ships to receive broadcasts of maritime safety information to prevent any untoward incident. Introduction of the GMDSS spells the end of the Morse code communications and consequently leading to the redundancy of the services of a special radio officer. The duties of the radio officer have been moved to the Captains and Mate.

In 1988, IMO amended Chapter IV of the Safety of Life at Sea (SOLAS) Convention, to include the GMDSS Radio regulations. The GMDSS regulation was implemented in phases. It started on February 1, 1992 and was implemented in full by February 1, 1999 for all ship that fall under the SOLAS convention.

On December 1, 1992 amendments to the International Convention on Standards of Training, Certification and Watchkeeping (STCW – Convention) relating to GMDSS and conduct of trails were adopted and entered into force. This affected the training of personnel conducting the radio duties on board vessels. The Captains and the Mate are now responsible for the radio duties on board the vessels and the teaching material have been included in their training.

Mandatory provisions relating to radio watchkeeping are set forth in the ITU Radio Regulations and in the International Convention for the Safety of Life at Sea, 1974 as amended, (SOLAS '74).

Provisions for issuing certificate related to the GMDSS are set forth in Chapter IV of the International Convention on Standards of Training, Certification and Watchkeeping (STCW'95).

Standards regarding radio personnel are set forth in Chapter IV of the STCW Code Seafarers' Training, Certification and Watchkeeping. Code. (see annex 1)

Since 1990 a development cooperation project in the maritime sector has been in effect between the Governments of Iceland and Namibia. The Icelandic International Development Agency, ICEIDA, has been responsible for the bilateral development of the maritime training with the cooperation partner, the Namibian Maritime and

Fisheries Institute, NAMFI, which is the responsible Governmental institute for providing maritime education in Namibia .

The Namibian Government emphasises on bringing the structure of maritime training in line with international standards forwarded by IMO.

Standards regarding education and training of radio personal are set forth in the IMO STCW 78/95 Convention and SOLAS International Convention on Safety of Life at Sea.

In 2001 the ICEIDA board decided to have an internal evaluation to prepare for discussions on the future direction of development cooperation in maritime training with Namibian authorities, the evaluation completed in April 2002, made several important recommendations for future cooperation.

One of the recommendation was that ICEIDA will provide technical advisors at a short term consultancies to various training sectors.

In light of the above ICEIDA decided to bring in a short term consultant to assist in audit and evaluation of the radio course at NAMFI and ensure that the course and its material and devices meets the STCW requirements set forward by IMO for due recognition.

The undersigned author of the report wishes to extend his gratitude and appreciation to the personnel of NAMFI, particular the personnel of Navigation Department and the office staff, for a good and enjoyable cooperation during the period. Additionally, special thanks to the personnel of ICEIDA in Namibia for their cooperation and hospitality.

June. 2004-06-10

Mr. Thordur Thordarson, ICEIDA, consultant.

Aim of the project

The aim of the project set up by ICEIDA is to ensure that the GMDSS course at NAMFI attains IMO standards requirements.

Terms of Reference for the Consultant

Job Description

Audit and confirm teaching material:

- 1.1 The entire material (correct if necessary)
- 1.2 The sequence of the material (change if necessary)
- 1.3 Teaching technique (guide the teachers when necessary)
- 1.4 Presentation (format)

Tutoring and training

- 2.1 Class 5 and Class 6
 - 2.2 Assist with preparation of teaching material
 - 2.3 Monitor the teachers
 - 2.4 Guide the teacher
 - 2.5 Assist with teaching if necessary
- 3 Assist teaching in a GMDSS course if offered to the industry inside the time frame.
- 4 Inspection of the whole course
- 4.1 Submit proposals for upgrading the:
 - 4.1.1 Teaching material
 - 4.1.2 Curriculum
 - 4.1.3 Teaching technique
 - 4.1.4 Equipment

The course must be upgraded to fulfil IMO requirements.

Time frame

Classes for the main course will commence on the 19th of January, 2004, which implies that by the time the consultant arrives the teaching process will be on. As such, the consultant must immediately go through the teaching material and start observing the teaching procedure.

By the 20th of February, 2004 the consultant will be expected to have gained familiarisation with the Institute. At this point the consultant may begin evaluating teaching material and carry out changes if necessary.

Around the 25th of February the consultant will be expected to submit the first situation report.

After about four weeks i.e. around the 20th of March, 2004 the second report will have to be submitted. By this time the consultant must complete evaluation of all teaching

aids, teachers and equipment. This will be a much detailed report containing the consultant's opinion and recommendations.

The consultant must bear in mind that NAMFI is in the process of developing and training the teaching faculty. Therefore, the teachers' progress should be monitored at every step.

The third report will have to be submitted by the 20th of April. The focus should be on suggestions and recommendations for changes that are not already mentioned in the previous reports. The final report will be due for submission by the 20th of May.

Co-workers

The consultant will work closely with the Head of Navigation Department and the teachers of the department, the leaders of NAMFI, Walvis Bay Radio Station Manager and radio officers.

Telecom Namibia is responsible for issuing the certificates. Walvis Bay Radio is the executing authority and assessing body as well.

Two Namibians, the future radio communication teachers will be the counterparts.

Audit and confirm teaching material

Teaching material

The teaching material that was evaluated consisted of 35 folders containing 280 transparencies for the ROC course and over 300 transparencies for the GOC course. In addition to the transparencies there are copies from the Internet concerning Port State Control and the STCW Convention which are not in relation with the GMDSS radio communication regulations.

The sequence of the material was non-coherent and in poor order. There were lots of repetitions, the material was far too much in quantity and often not in relation with the subject.

When evaluating the material, very little information was found on the radio service rendered from the Namibian authority. Although GMDSS is aimed at global communication, it is relevant to touch that subject when considering where students from NAMFI seek jobs. This is done in countries where the consultant is familiar with teaching method e.g. Norway, Denmark, UK, and Iceland.

The evaluation took a considerably long time because of the enormous quantity of material, and also because the material had to be corrected and reorganised.

When looking back and evaluating the work that has been done in the last 3 month it can be said that the material have been more or less rewritten, and the presentation format reworked to be more accessible and user-friendly.

Why was this necessary?

- a. The scope of the material was far too large, it is hardly relevant to go through all those transparencies considering the time that is estimated for the courses.
- b. The sequence of the material is too confusing and often not in relations with the project.

Teaching aids devices.

The teaching aids consisted of a Poseidon Simulator, GMDSS comparable, several emergency position indicating radio beacons (EPIRBS) of different types and some old radios which are not connected and no longer in use, and not allowed to use on GMDSS ships.

The Poseidon Simulator consists of seven stations or computers - one main station for the teachers and six others as the outstation or the students' stations. The simulator is supposed to allow you to perform most of the communication functions that are done on board a ship.

The simulator has not been in proper working condition this semester. There have been some problem with the students stations. An instructor manual was not available or received despite enquiries.

Mr. Hein Bertram former employ at Walvis Bay Radio has been involved to repair the simulator following consultations with Víðir Sigurðsson and the Head of NAMFI.

Classroom

The classroom where the Poseidon Simulator is located has no power sockets and power has to be drawn by an extension cord under the door from the adjoining rooms, temporary arrangement has been made for power connection to individual computer or stations as well which all looks very disorganised. (see annex 3, picture 1 and 2 of radio room).

Small partition-like walls of about 50 cm length divide the room into small cabin-like sections at many points and at one place a stringer-like structure hanging from the ceiling can be a hindrance to the teacher. (see annex 3, picture 1,2 and 3)

The classroom is not kept in good order and students' belongings are left all over the place and it appears that no one is responsible for cleaning up the mess. (See annex 3 and pictures 1,2 and 3)

This has been brought to the attention of responsible trainee instructor for radio, Head of Navigation Department and Acting Director of NAMFI.

Co-workers

During the period at NAMFI the consultant was supposed to work closely with the Head of Navigation Department and the teachers of the department and the leaders of NAMFI.

The consultant had a good and close cooperation with the Head of the Navigation department Mr. Clive Kambongarera, concerning the project, and where necessary a good cooperation with Acting Director and Administrative Manager, Mr. Polli Andima, .

Several meetings were held with Mr. Andima and Mr. Kambongarera concerning the project and discussing the situation and finding solution for minor problems. Both were very positive about the recommendations made by the consultant in modifying and restoring the classroom and simulator, and in some cases acted very quickly, e.g. when seeking quotation to restore the electricity supply to the classroom and seeking assistance to repair the simulator.

Mr. Vilmundur Víðir Sigurðsson, instructor and ICEIDA Project Manager and Mr. Elfar Óskarsson, acting Head of the Engineering Department, ICEIDA, attended the meetings and participated in the discussions. Mr. Elfar Óskarsson was of great help when seeking quotations for restoring the electricity in the classroom. Steps were taken to seek for proposition to fix the electricity and put up power socket and ladder for the electrical cable and data cable.

Teacher

The two of the Namibians communication teachers expected to work with the consultant were Justi Moses, trainee instructor deck department and Mariam Kambinda, junior instructor deck department. At that time Mariam Kambinda, was pregnant and was due to give birth in the end of April or beginning of May, so she did not participate in the consultant work. (This was one of the reasons it was decided to set up a full GMDSS seminar at the end of the consultant's period, for all the teachers at the deck department at NAMFI.)

As such in the end there was only one communication teacher (trainee instructor) at NAMFI that worked closely with consultant, Mr. Justi Moses.

Mr. Moses is talented and well articulated. He speaks out clearly and confidently in good English language to the students. But he demonstrated arrogance towards to students.

He needs more experience in doing radio communication at sea and his basic knowledge in telecommunications might be improved through short courses.

All these have been brought to the attention of Mr. Moses and during the consultant time at NAMFI, Mr. Moses has shown some improvements.

Cooperation with Telecom Namibia.

Cooperation with Telecom Namibia has been through Mr. John P Shelley, Station Manager at Walvis Bay Radio.

Several meetings were held with Mr. Shelley concerning cooperation between NAMFI and Telecom Namibia, which is essential as the Ministry of Works and Transport has appointed Telecom Namibia as the recognized Radio Regulatory Authority in Namibia. This includes setting of Radio Standards, Radio Regulation, assessing of GMDSS examinations and certification of GMDSS .

As said before when evaluating the teaching material, very little information was found on Radio Service in Namibia. Mr. Shelley was contacted and asked for his assistance in preparing material concerning Radio service in Namibia.

Mr Shelley responded very quickly and forwarded a brief history on Walvis Bay Radio and the Radio service, which Walvis Bay Radio offers today, and its future plan. Mr Shelley has been very cooperative and has offered his assistance and cooperation. Furthermore there have been discussion with Mr. Shelley concerning cooperation between NAMFI and Telecom Namibia (Walvis Bay Radio) and how employees from Walvis Bay Radio can assist in this project.

Cooperation with ICEIDA employees

During the consultant's period at NAMFI the cooperation with other ICEIDA employees have been very pleasant and enjoyable. Mr. Vilmundur Víðir Sigurðsson instructor, ICEIDA project manager, Mr. Vilbergur Magni Óskarsson, Instructor, navigation department, and Elfar Óskarsson, acting head of engineering department, all of them have been a great help, and always willing to render assistance.

That is also the fact of others ICEIDA members in Walvis Bay head office, Mr. Gísli Pálsson, country programme director, ICEIDA and Mrs. Ludín Valtýsson, secretary, who where always willing to assist.

Regular meetings where held with the Country Programme Director, Gísli Pálsson concerning the project, and written notes handed in on the progress. Mr V. Víðir Sigurðsson, ICEIDA project manager did participate in those meetings.

GMDSS seminar

As the consultant's project period was approaching to an end, the idea of organising a GMDSS seminar for the teachers of deck department of NAMFI and other instructors was brought up.

A request was sent to ICEIDA for permission to prolong the period for the consultant to 11th of June and permission was granted and a full GMDSS seminar was held from 31 May to 11 June.

The seminar was mandatory for Namibian instructors and foreign instructors were offered to participate in the seminar. Mr. Hallvard M. Senevik was the only one of the foreign instructors to participate in the seminar.

The seminar was a good opportunity to endeavour (experience) revised teaching material.

Participants in the seminar:

Vilmundur Víðir Sigurðsson Instructor, ICEIDA project manager.

V. Magni Óskarsson, instructor, navigation department, ICEIDA.

Clive Kambongarera, head of department, navigation department.

Johnson Gurirab, trainee instructor, navigation department

Solomon M. Andreus, trainee instructor, navigation department

Remarias Claassen, trainee instructor, navigation department

Justy Moses, trainee instructor navigation department

Tobias N Ambala , trainee instructor, navigation department.

Hallvard M Stenevik, instructor, navigation department, NORAD.

CONCLUSIONS AND RECOMMENDATIONS

The conclusions of the study by the ICEIDA consultant illustrates.

Teaching material

When evaluating the material, which was used for teaching radio communication at NAMFI, and prepared by former ICEIDA employ Mr. Sigurður Jónsson, instructor at navigation department it is possible to say that it fulfils the requirement, set out in the STCW Code chapter IV Standards regarding radio personnel. (see annex 2)

But the material did not follow the sequence, of the IMO Model Course 1.25 General Operator Certificate for the GMDSS and IMO Model Course 1.26 Restricted Operators Certificate for the GMDSS. In many ways the material was not coherent and mixed up.

The conclusion was that the material had to be re-created and reorganised. This has been done and the transparencies have been decreased, reorganized and notes made for each chapter.

Classroom and simulator

The condition of the classroom where academic education and teaching is done is satisfactory and fulfils the requirement set forward by IMO, it has nearly all the modern facilities that a classroom needs to have such as a overhead projector and a computer projector is accessible if necessary.

The classroom where the Poseidon Simulator is situated is rather small and needs improvement.

It is recommended that if this is the future classroom for simulator teaching for radio then it should be restored.

The walls that divide the room and the stringent that hangs from the ceiling should be removed at the first opportunity. (See annex 2 and attached picture)

There should not been more than two students working on each station at a time, that means that there is a maximum 12 student in each class.

The room should be kept in better order and students should not to be allowed to leave their belongings behind when they leave the classroom.

Simulator

As the state of the Posidon radio simulator is now and has been for the last five months at least is not acceptable, it is hardly potential to accept the GOC and ROC courses as GMDSS comparable now, where the Posidon simulator is the only equipment to teach radio function at the institute.

It is recommended that the simulator will be maintained and updated by its manufacturer or representative at the first opportunity, or prior for the next semester.

Teaching method

It is recommended that the electrical part of the teaching, both theory and practical is done by the engineering department where all the necessary and mandatory devices are in place. This part of the GMDSS course should not take longer than 6-8 class hours. This has been brought to the attention of the Head of Navigation department and the Head of the Engineering Department with a positive response.

Teacher.

It is essential that the teacher for GMDSS, is competent for the job.

It is recommended that the future communication teacher be trained, both in practical and academic matter, in radio function. During this training time the trainee should receive training on sea service doing radio communication function and academic studies.

It is also essential that the trainee be employed at NAMFI for a considerable time after his/her training session.

The head of NAMFI should consider the possibility to have two communication teachers in the near future.

The consultant would recommend that Mr Justy Moses will be suitable for the post once the previously mentioned issues are addressed

Cooperation with Telecom Namibia.

Cooperation with Telecom Namibia, is necessary and important, Telecom Namibia has been appointed, as the recognized Radio Regulatory Authority in Namibia.

Mr John P Shelley, Station Manager at Walvis Bay Radio, has contacted NAMFI and asked for an agreement concerning assessing of GMDSS examinations and certification of GMDSS, and other matter concerning radio communication.

It is recommended that collaboration between NAMFI and Telecom Namibia will be kept in good order and agreement between the two party done concerning assessing of GMDSS examinations and seminar's.

Books and other aids

It is recommended that following book and videos is purchased for the Institute.

REED'S VHF - DSC Handbook, author Sue Fletcher

ISBN 0 901281 73 5, Thomas Reed Publications.

A MARINER'S GUIDE TO MARINE COMMUNICATIONS , by Ian Waugh.

ISBN 1 870077 58 X

Published by The Nautical Institute, 202 Lambeth Road London.

HANDBOOK FOR MARINE RADIO COMMUNICATION

By G.D. LEES and W.G WILLIAMSON

ISBN 1-85978-672-3

LLP Reference Publishing 69-77 Paul Street London EC2A 5LQ

VIDEOTEL LONDON, E-mail videotel.co.uk

GMDSS - The Global Maritime Distress and Safety System (26 Mins)

Code No 466

Future Plan

The facility for communication teaching at NAMFI are at the minimum level of standard to fulfil the GMDSS requirement and STCW'95 standards.

It is recommended that the teaching facility for communication is incorporated in the bridge project and improved by adding some life radio at that location in the building. When talking about life radio it is meant VHF - DSC life radio, MF/HF transceiver, Inmarsat - C station and NAVTX, this improvement is able to do in steps.

Final

When looking at the project today the consultant is of the opinion that the time frame for the project was to stringent.

The evaluation and correction of the material took more time than expected. It would have been better to have more time to follow the new material and direct trainee instructor for one semester.

Glossary:

| | |
|--------|--|
| GMDSS | Global Maritime Distress and Safety System |
| IMO | International Maritime Organization |
| ITU | International Telecommunication Union |
| STCW | International Convention on Standards of Training, |
| ICEIDA | Icelandic International Development Agency |
| GOC | General Operator Certificate |
| ROC | Restricted Operators Certificate |
| NAMFI | Namibian Maritime and Fisheries Institute |
| SOLAS | Safety of Life at Sea |
| SAR | International Convention on Maritime Search and Rescue |

Appendix I

Documents used for evaluation GMDSS COMMUNICATION COURSES AT NAMFI.

SOLAS Chapter IV on Radiocommunication.

STCW'78 Convention amendments '95 Chapter IV Radiocommunication and radio personnel

STCW'78 Convention amendments '95 Chapter IV Guidance regarding radio communication and radio personnel

STCW'78 Convention amendments '95 STCW-Code. Chapter IV Standard regarding radio Personnel.

STCW-F Convention Chapter II Certification of skippers, officers, engineer officers and radio operators.

STCW-F Convention Resolution 1. Training of radio operators for the global maritime distress and safety system (GMDSS)

IMO Model Course 1.25 General Operator Certificate for the GMDSS

IMO Model Course 1.26 Restricted Operators Certificate for the GMDSS.

FAO/ILO/IMO Document for Guidance on Training and Certification of Fishing Vessel Personnel

IMO NAVTEX Manual (IMO Publication UNI – 951E)

GOVERNMENT NOTICE No. 19 from 1998 Merchant Shipping Act 1951 Merchant Shipping Radio Installations Regulations

ITU Radio Regulation

Appendix 2

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Table A-IV/2

Specification of minimum standard of competence for GMDSS radio operators

Function: Radiocommunications at the operational level

STCW Code

| Column 1 | Column 2 | Column 3 | Column 4 |
|---|--|---|---|
| Competence | Knowledge, understanding and proficiency | Methods for demonstrating competence | Criteria for evaluating competence |
| Transmit and receive information using GMDSS subsystems and equipment and fulfilling the functional requirements of GMDSS | In addition to the requirements of the Radio Regulations, a knowledge of: <ol style="list-style-type: none"> 1. search and rescue radiocommunications, including procedures in the <i>IMO Merchant Ship Search and Rescue Manual (MERSAR)</i> 2. the means to prevent the transmission of false distress alerts and the procedures to mitigate the effects of such alerts 3. ship reporting systems 4. radio medical services 5. use of the <i>International Code of Signals</i> and the <i>Standard Marine Navigational Vocabulary</i> as replaced by the <i>Standard Marine Communication Phrases</i> 6. the English language, both written and spoken, for the communication of information relevant to safety of life at sea <p>Note: This requirement may be reduced in the case of the Restricted Radio Operator's Certificate</p> | Examination and assessment of evidence obtained from practical demonstration of operational procedures using: <ol style="list-style-type: none"> 1. approved equipment 2. GMDSS communication simulator, where appropriate* 3. radiocommunication laboratory equipment | Transmission and reception of communications comply with international regulations and procedures and are carried out efficiently and effectively English language messages relevant to the safety of the ship and persons on board and protection of the marine environment are correctly handled |

* See paragraph 41 of section B-I/12 of this Code

| Competence | Knowledge, understanding and proficiency | Methods for demonstrating competence | Criteria for evaluating competence |
|---------------------------------------|--|---|---|
| Provide radio services in emergencies | The provision of radio services in emergencies such as: <ol style="list-style-type: none"> 1. abandon ship 2. fire on board ship 3. partial or full breakdown of radio installations <p>Preventive measures for the safety of ship and personnel in connection with hazards related to radio equipment, including electrical and non-ionizing radiation hazards</p> | Examination and assessment of evidence obtained from practical demonstration of operational procedures using: <ol style="list-style-type: none"> 1. approved equipment 2. GMDSS communication simulator, where appropriate* 3. radiocommunication laboratory equipment | Response is carried out efficiently and effectively |

* See paragraph 41 of section B-I/12 of this Code

Table A-IV/2

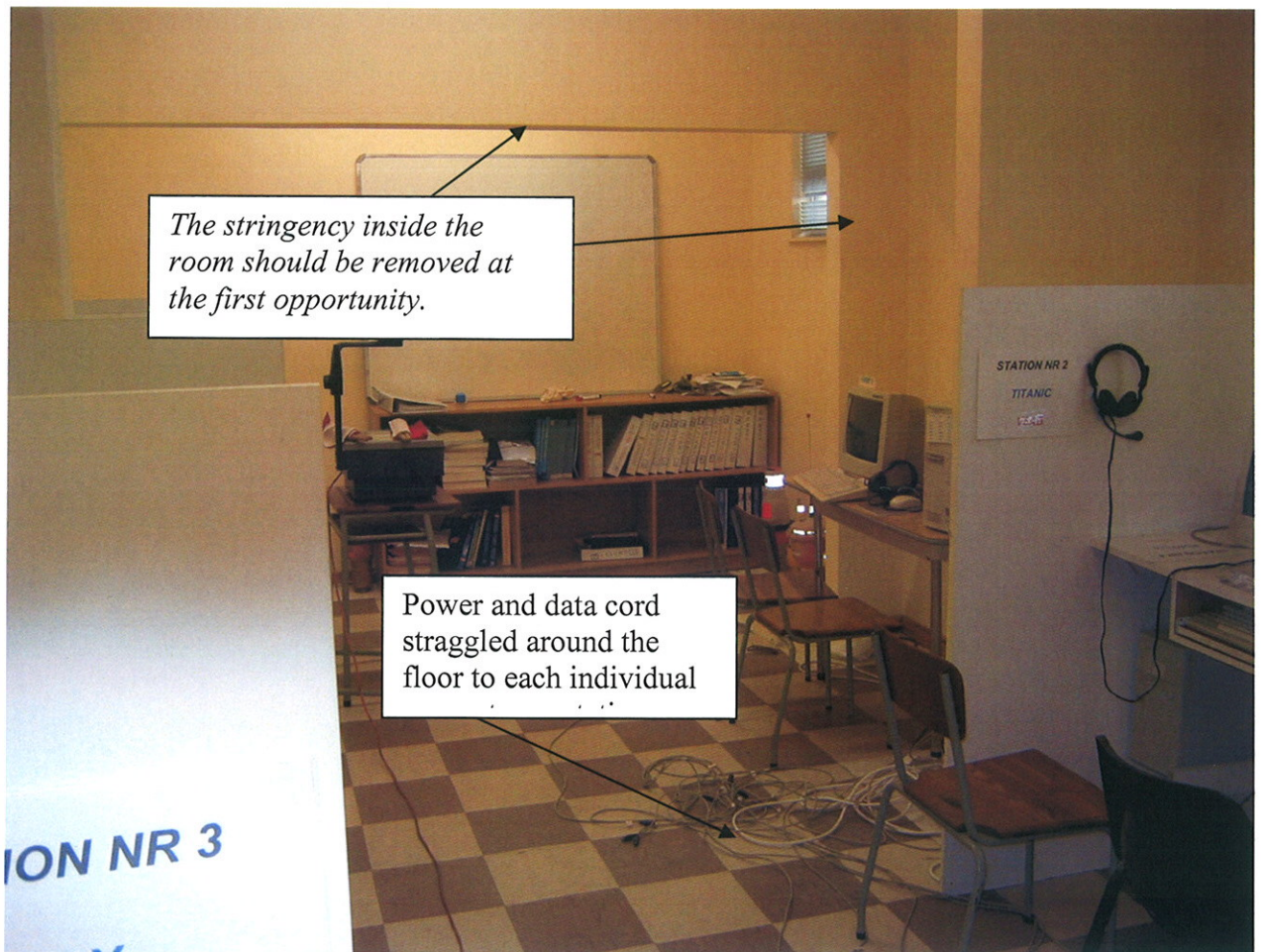


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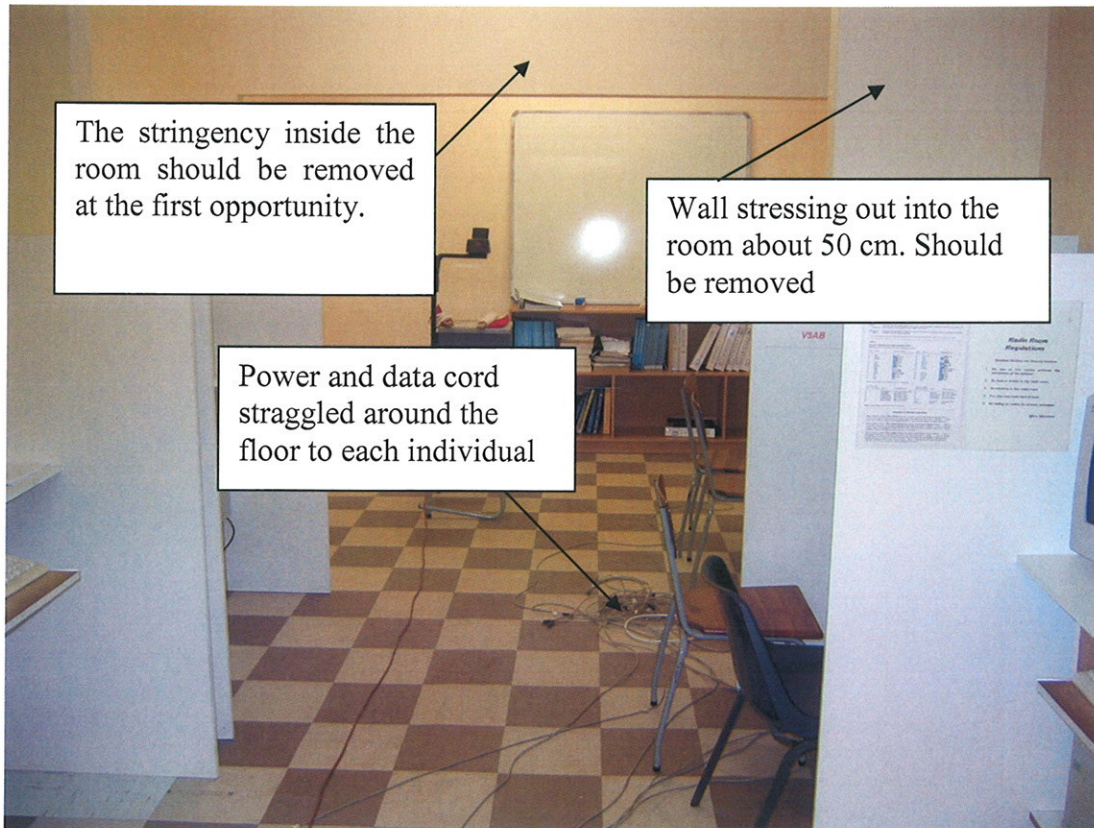
Appendix 3

Picture from classroom radio simulator

Picture no 1



Picture no 2



Picture 3

Picture 3

