A NEW AWESOME VLF RECEIVER SET UP IN VIETNAM

Implementation of ISWI - AWESOME Project in Vietnam, a new VLF Receiver was setting up in Nha Trang.
Instrument Provider: STAR Laboratory of Stanford University.
Hosting Organization: VAST (with the participation of two research institutes: Ho Chi Minh City Institute of Physics and Nha Trang Institute of Technology Research and Application).

This is a Photo Report for the installation of the AWESOME VLF Reciver at Nha Trang station (12.20 N; 109.13 E).
The installation was executed by Vietnamese AWESOME Group led by Dr. Hoang Thai Lan and with instructions remotely from Dr. Morris Cohen (leader of AWESOME Stanford Team).

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Nha Trang is a coastal City

The International Airport Cam Ranh, Nha Trang

The highway from Airport to Nha Trang City

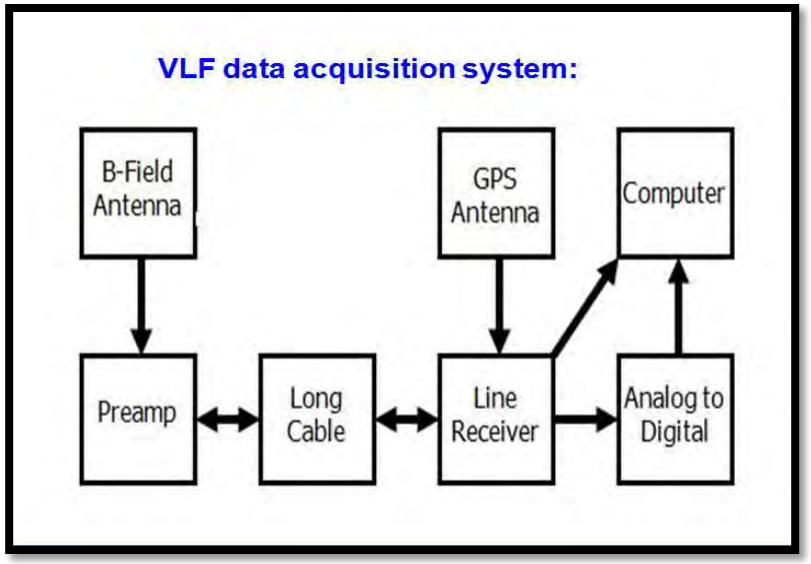
A street going to the Nha Trang station

The street going to the station

A side of the station seen from the street

The Station

The building where the AWESOME is setting up



There are 5 main components to a complete VLF Receiver:

1) VLF Antenna
2) GPS Antenna
3) Preamplifier box
4) Line receiver box
5) Computer and software.

The Antennas gather the necessary data for the recording. The Preamplifier Box and Line Receiver Box process the signals and pass them to the computer.


The VLF loop antenna


GPS antenna

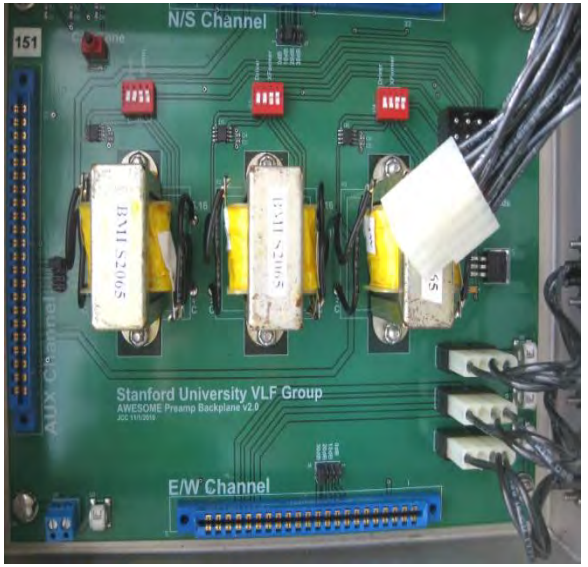

Preamplifier box


Line receiver box


Computer


Checking the components before installation


The opened Preamplifier Box

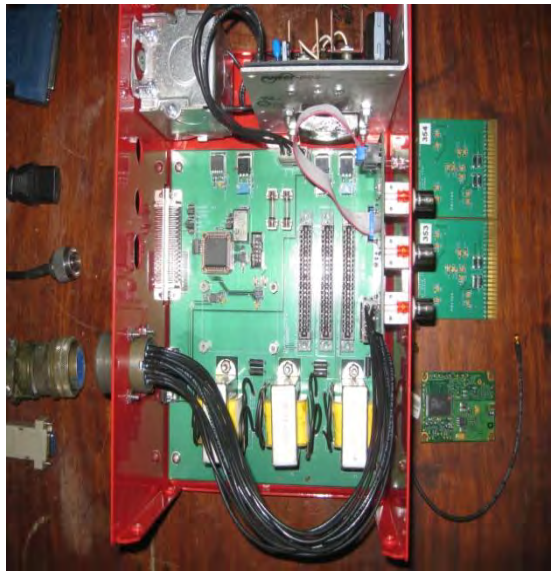


The Mainboard of Preamplifier

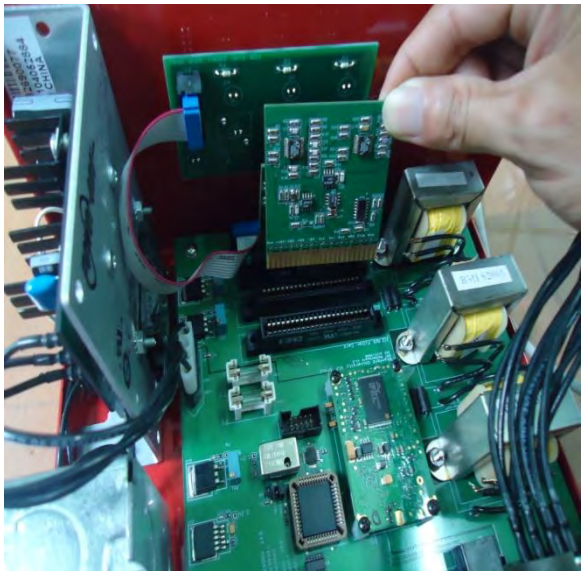
The E/W and N/S channel cards

Testing signals of the Preamplifier

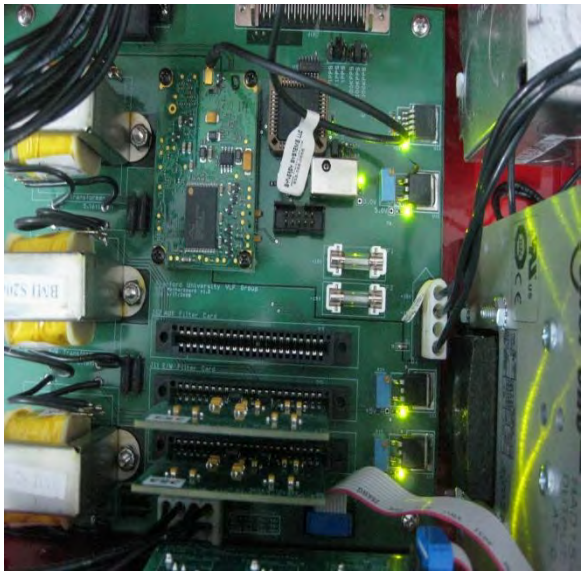
The Line Receiver



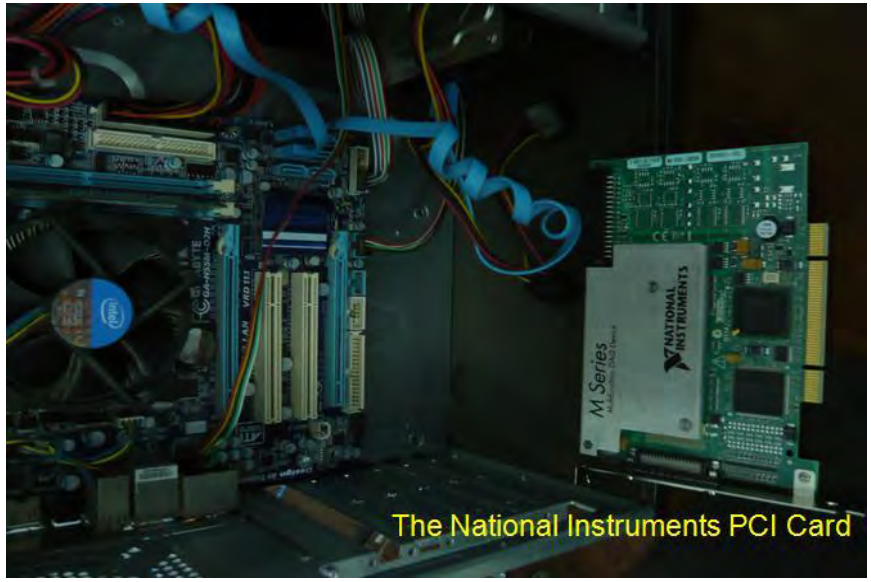
The Mainboard and Cards of the Line Receiver



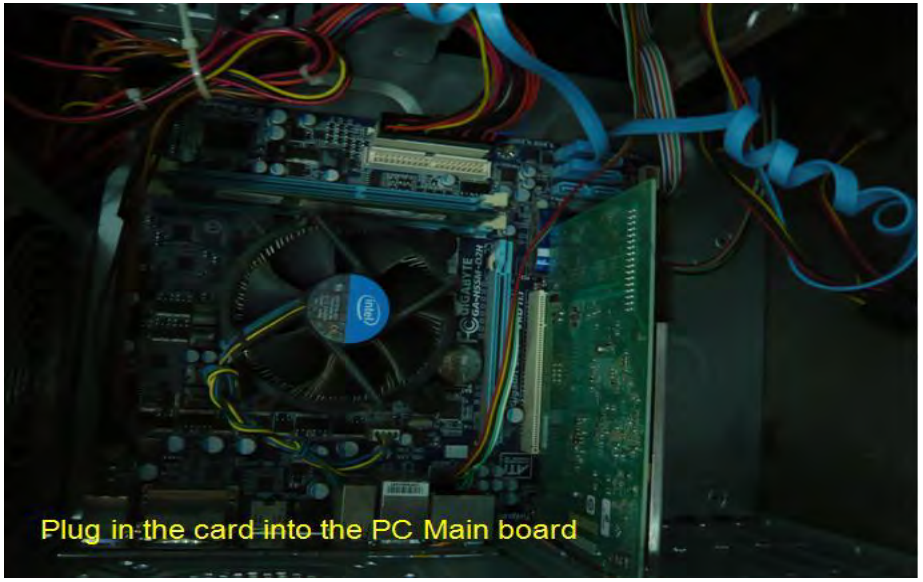
Plug in the cards into the Mainboard



Testing signal of the Line Receiver



The National Instruments PCI Card


Plug in the card into the PC Main board


Design and preparing for installation the VLF antenna


Select a location for the GPS antenna on the roof

Setting up the GPS antenna on the roof of the building

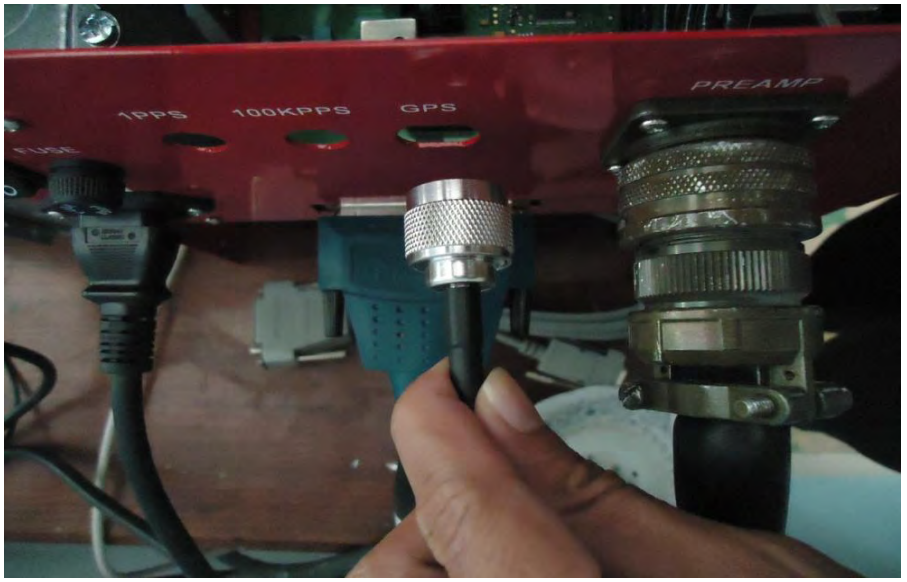
The GPS antenna is mounted

Assembly the VLF Antenna

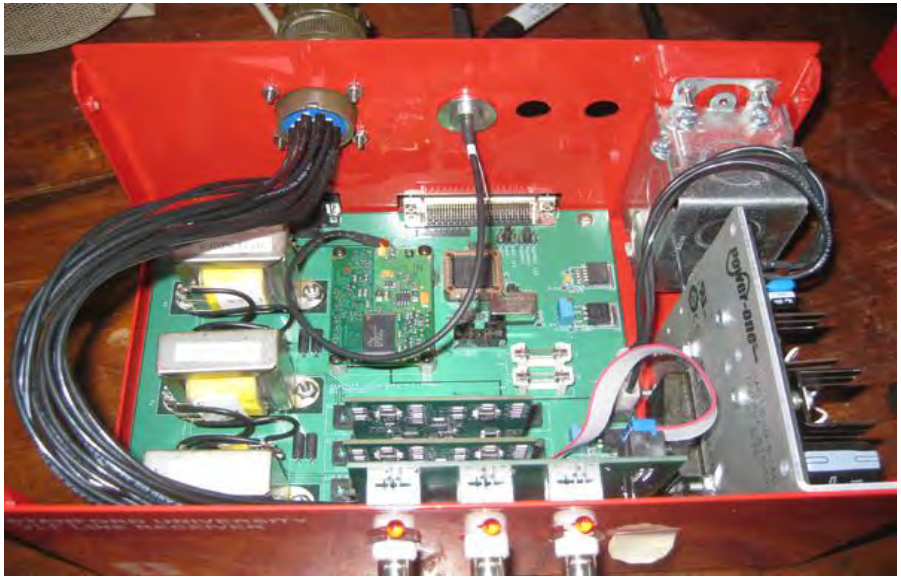
Mounting the Preamplifier Box to the VLF Antenna

Determine how to run the cables from outside to the room

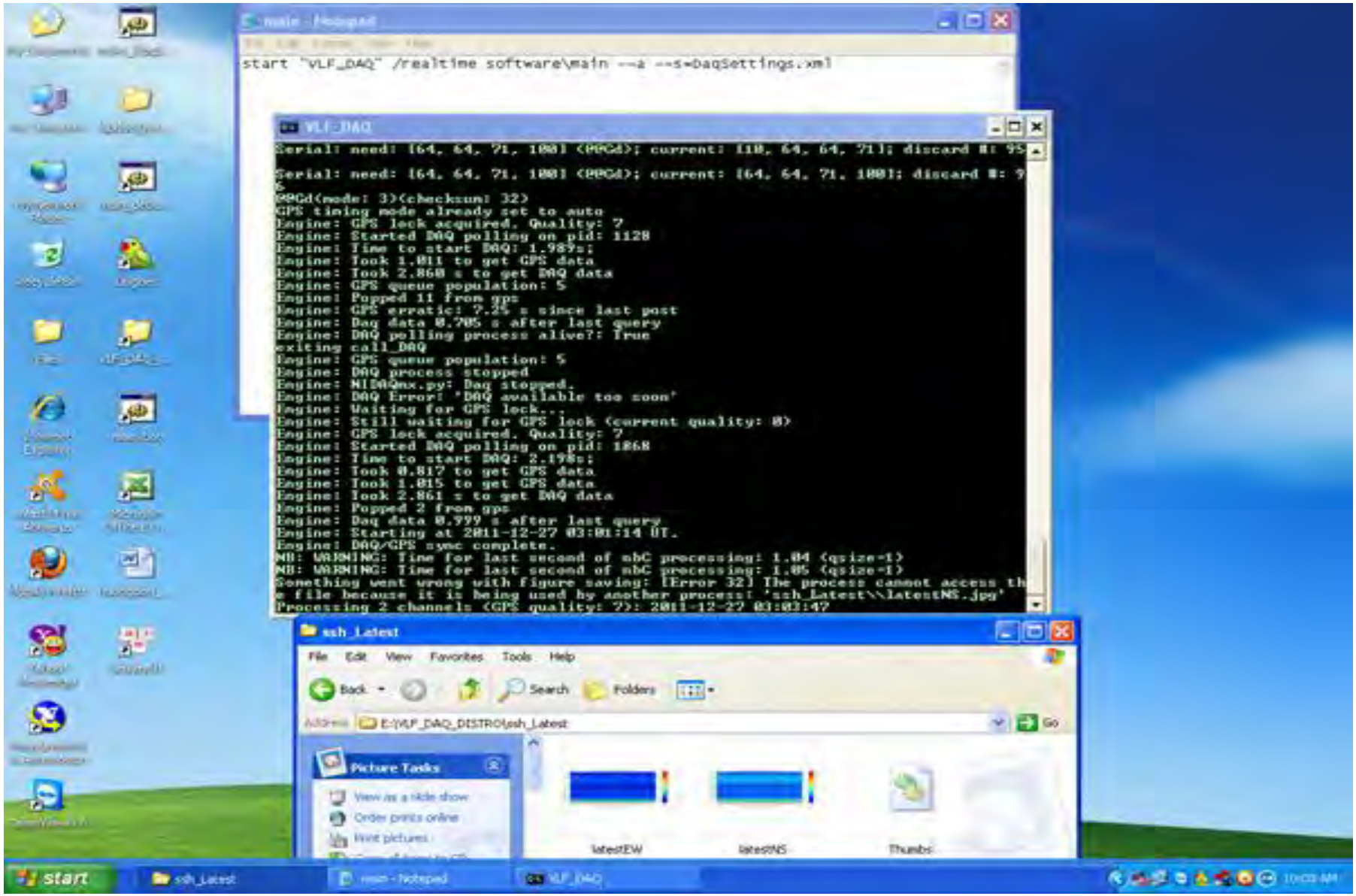
The GPS and VLF Antennas installed



Assembly the antennas cables



Assembly the VLF Receiver and Computer



Installing software

Checking the internet connection

Trying to find out why it appears flaky

Exchange ideas and discussing problems


The instrument started working from January, 2012


The resort located beside the station


Tea-time


A beach of Nha Trang

Vietnam AWESOME Team:

1. Dr. Hoang Thai Lan, leader.
5. MSc. Vinh Hao (Nha Trang Institute), responsible for AWESOME receiver in Nha Trang

2. Ms. Tien (Nha Trang Institute)
3. Ms. Tam (Ho Chi Minh Institute)
4. Mr. Vinh (Ho Chi Minh Institute)
6. Mr. Tue (Nha Trang Institute)
7. Mr. Thang (Nha Trang Institute)
8. Mr. Thao (Nha Trang Institute)
9. Mr. Tuat (Nha Trang Institute)
10. Dr. Vinh (Nha Trang Institute

Dr. Hoang Thai Lan, ISWI National Coordinator of Vietnam - leader of AWESOME Group

Vietnam AWESOME Team wants to thank Stanford AWESOME Team for all they did to make the VLF Receiver setting up in Vietnam successfuly. Special thanks to Dr. Morris Cohen for doing so much to solve the problems in sending the instrument and during the time of installation it .

I also would like to express my sincere thanks to Prof. Hans Haubold for his very valuable supports in this cooperation.

Reported by Hoang Thai Lan