

# ASEAN IVO 2020

# **Cambodia NerveNet Final Report**

National Institute of Information and Communications Technology(NICT) National Institute of Posts, Telecommunications and ICT(NIPTICT), University of Computer Studies, Yangon(UCSY), Myanmar

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Speaker: Mr. Van Khema

Project Title: Cambodia NerveNet Field Testing

**Project Members :** 







National Institute of Posts, Telecoms and ICT

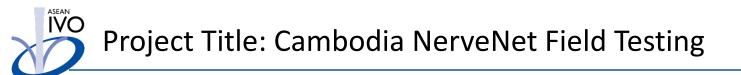
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Dr. Myint Myint SEIN

Project Duration : 3 Years,

Project Budget: USD90,000.00 (Ninety Thousand US Dollars)



### **Vision "Smart Village" with NerveNet**



Education



Agriculture



Healthcare



Project Title: Cambodia NerveNet Field Testing

| 2016  | 2018   | 2019  |
|---|--|---|
| NIPTICT   | Cambodia NerveNet Field Te   | sting NCP   |
| Skun District, Kampong Cham<br>(Cheurng Prey TeleCenter)  | Kampong Leng District,<br>Kampong Chhnang  | Phreh Sdach District,<br>Prey Veng Province   |
| <ul> <li>General Dep. Of ICT</li> <li>Telecom Cambodia (TC)</li> <li>Telecommunication Regulator<br/>Cambodia (TRC)</li> <li>Smart</li> </ul> | <ul> <li>6 Schools were Selected</li> <li>Data Centralization at<br/>NIPTICT</li> <li>NerveNet Base System run<br/>on the top of Rasberry Pi 3</li> <li>Distance learning application</li> <li>8Mbps of Internet supported<br/>by Metfone</li> </ul> | To give proof of NerveNet Base<br>System Performance<br>• Quiz chart development<br>• Test Management system<br>Development |
| TRC<br>Smart<br>Skun antenna towers   | metfene  | Cambodia Education<br>Assistance Fund (CEAF)  |
|   |  |   |

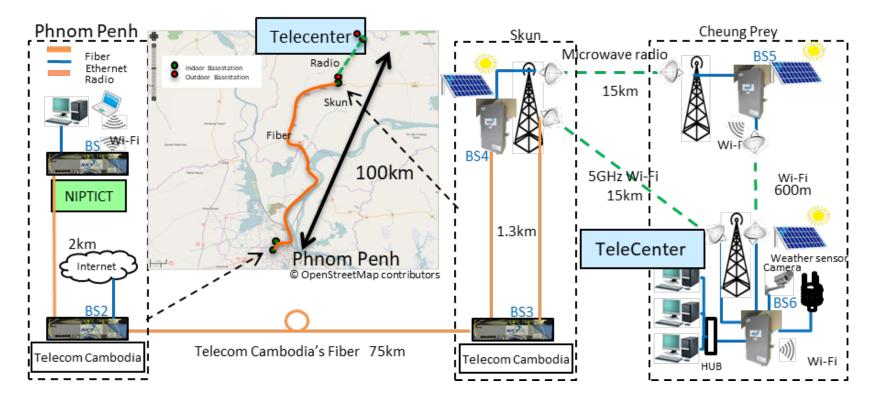
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#### I. Project Summary

Since 2016

- Optical cable, microwave radio frequency, and Wi-Fi
- Solar-powered support Media converter and NerveNet base system
- 8Mbps of Internet have been provided with digital education content to TeleCenter
- Voice and video communication have been streamed at TeleCenter.



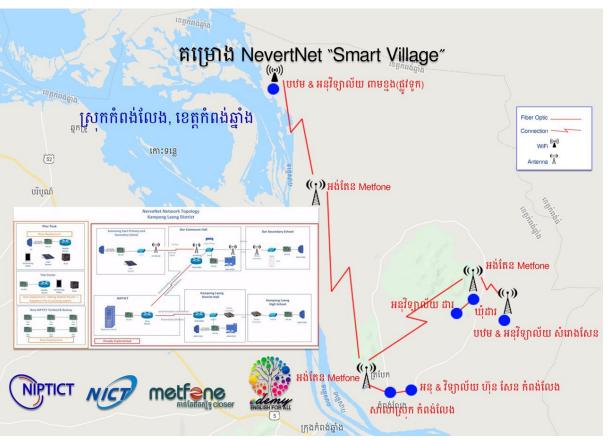
#### I. Project Summary

2018-2019

1. Kampong Cham

IVO

- Cheurng Prey TeleCenter
- 2. Kampong Chhnang
  - Kampong Leng District
  - Kampong Leng High School
  - Dar Secondary School
  - Dar Commune hall
  - Samrong Sen Secondary School
  - Plov Touk Secondary School
- 3. Prey Veng,
  - -Cambodia Japan friendship high school
  - Chea Sim Rakchey High School
  - Brotheat High School
  - Bonteay Charkey Secondary School
  - Hun Sen Takork High School
  - Bromou Prom High School



#### ASEAN IVO Forum 2020



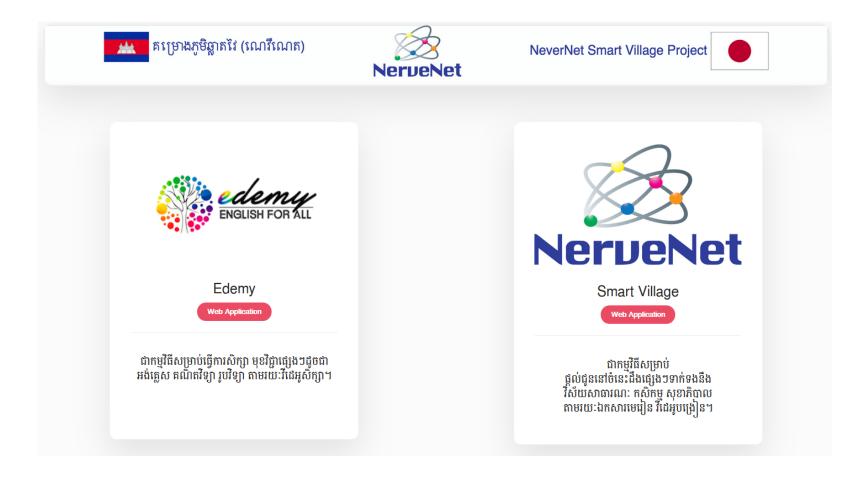
#### **Applications**

 Kids are able to study English, Math, Physic and so on through e-learning system.

- Local government officials learn about the information regarding public services information.
- Farmers are expected to benefits from the agricultural content and are able to share that knowledge within their community.

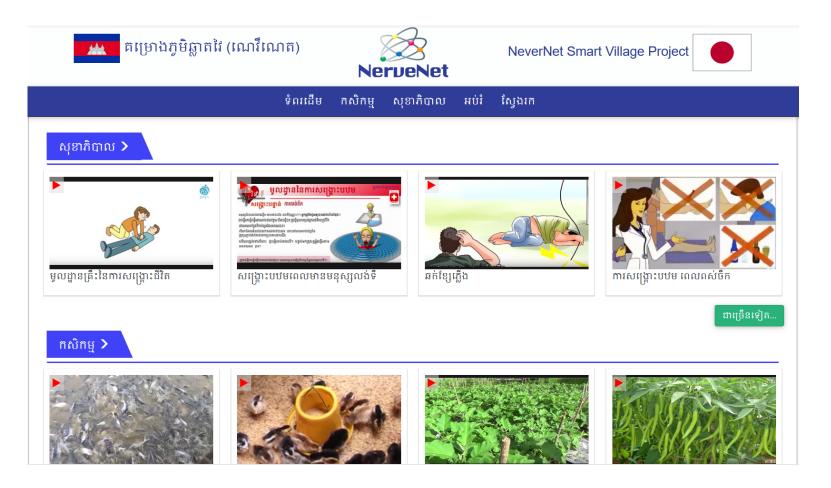


## **Education Content**





#### **Education Content**





## **Education Content**

| NerveNet              |   |  |
|-----------------------|---|--|
| English               | General English Course<br>▲ EDEMY Team<br>∰ 2016-10-25 06:55:49   | KHMER                                      |
| <b>+ -</b> គណិតវិទ្យា | Khmer Math, how to understand<br>trigonomitry by Te Laline Part 1<br>▲ admininstrator user<br>∰ 2018-09-03 05:07:42 |  |
| រំឈូខិរា              |   |  |
| គីមីវិទ្យា            |   | Developed by Edemy in partner with NIPTICT |





Local Government Officials



Secondary School



Secondary School Students



**Basic Computer Course** 



NerveNet Base system is one of resilient system. It provide mesh network topology in L2VPN with data distribution and synchronization.

The network topology can be scaled from small to wide area by utilizing diversities of communication network connectivity and L2VPN provides data communication security, stability and reliability.

Data distributed synchronization is delicate framework and has high capability to protect database, content application platform from hacking and any destruction by any means.

NerveNet operating system is all-in-one, no complication, and easy to customize/make it suitable for many projects in main topics such as natural disaster awareness, urban and rural education, agricultural research and analysis etc.



Cambodia is a developing country and many schools in rural area are lack of electricity and teachers so distance learning is under government consideration.

Using the NerveNet base system is one of the many good options to launch to support distance education to this rural schools.





# Thank You