

Electronics and Computer Technology for Disaster Management/ Communication in NECTEC

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Advanced Automation and Electronics (A2E) Research Unit

**National Electronics and Computer Technology Center
(NECTEC)**

Outline

- Introduction to NECTEC
- Activities in the other research units
- Activities in my research unit (AAERU)
 - Land Slide monitoring system
 - Dam safety monitoring system
 - Seismic monitoring system

Introduction to NECTEC

M i s s i o n s

NECTEC contributes to the development of Thailand's capability in electronics and computer technologies through:

- I. Research, development, design and engineering
- II. Technology transfer to industries and communities
- III. Human resource development
- IV. Policy research and industrial intelligence and knowledge infrastructure



Ministry of Science and Technology

National Science and Technology Development Agency

NECTEC MTEC BIOTEC NANOTEC TMC

(National Electronics and Computer Technology Center)

- *Advanced Automation and Electronics Research Unit*

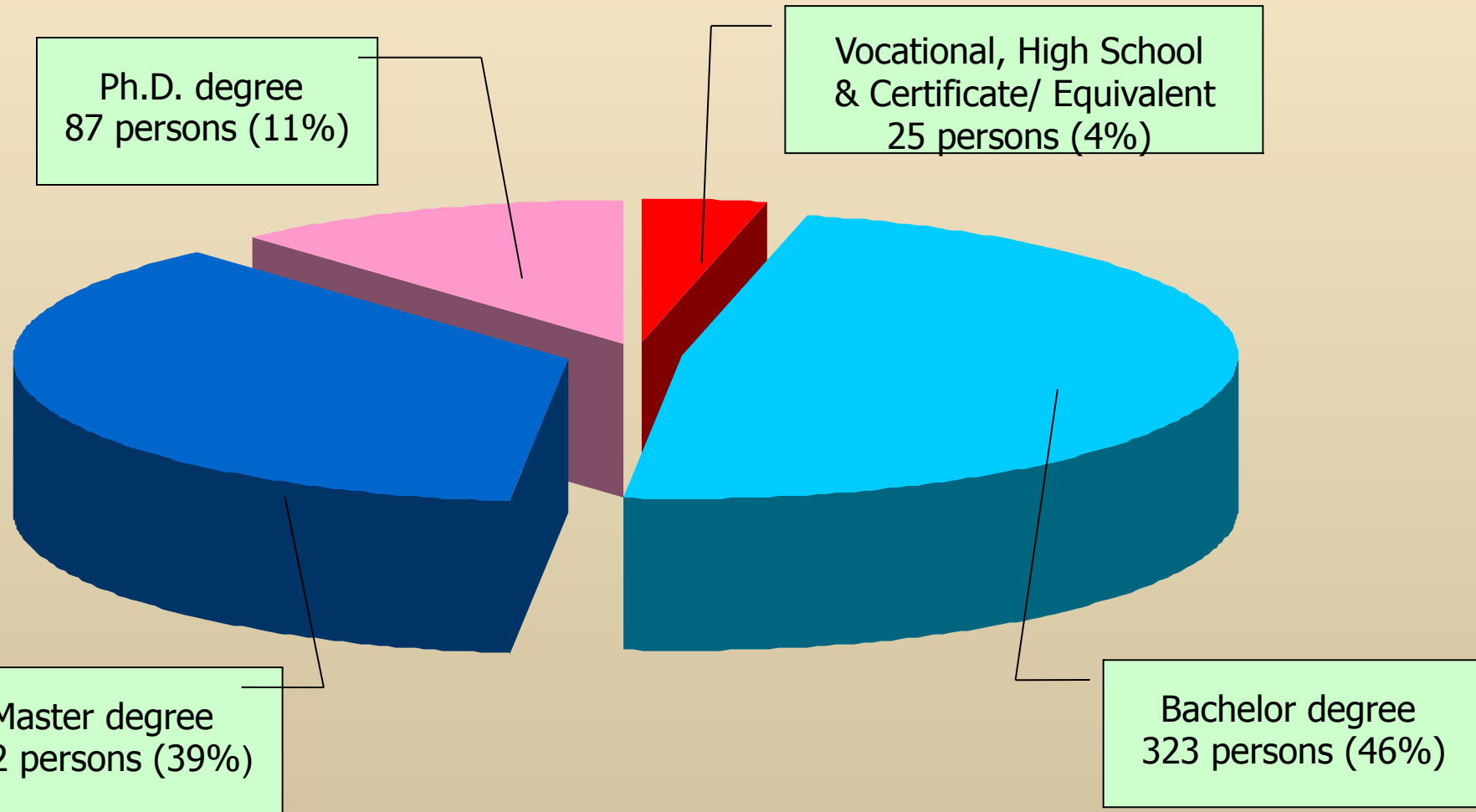
- *Intelligent Informatics Research Unit*

- Wireless Information Security and Eco-Electronics Research Unit

- *Information Communication and Computing*

- Intelligent Devices and Systems

Total Staff (in October 2011) 687 persons



Activities in the other research units

Video Cameras



Smart Sign

Traffy system



Cell Phone-Equipped Vehicles



GPS-Equipped Vehicles

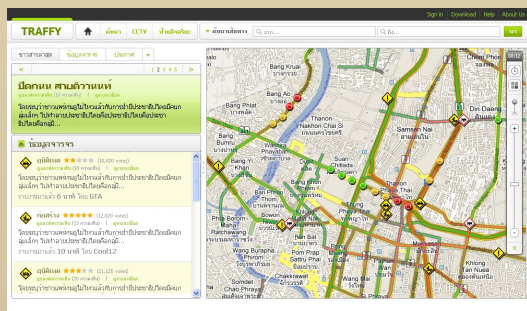


Traffic Information

Mobile Phone/ PC / PDA

Data Processing Database

GIS Web Server



Web



Smart Phone



Facebook/ Twitter

Traffic Information from Traffy



CCTV Images

VMS: Congestion Level by Area

Traffic News

Mobile Phone : www.traffy.in.th

Web: hermes.traffy.in.th/i/



Activities in my research units

- Land slide monitoring system
- Dam safety monitoring system
- Seismic monitoring system



Land slide monitoring system

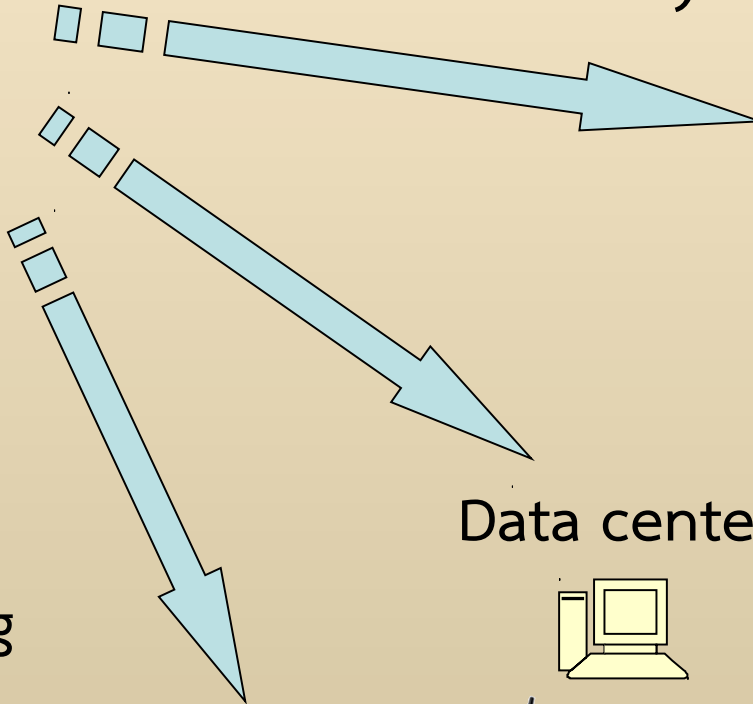


Village/
Community

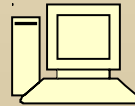


Light

Sound

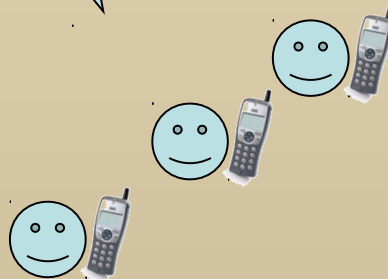


Data center



-3 stations in
Mae-Hong-Song

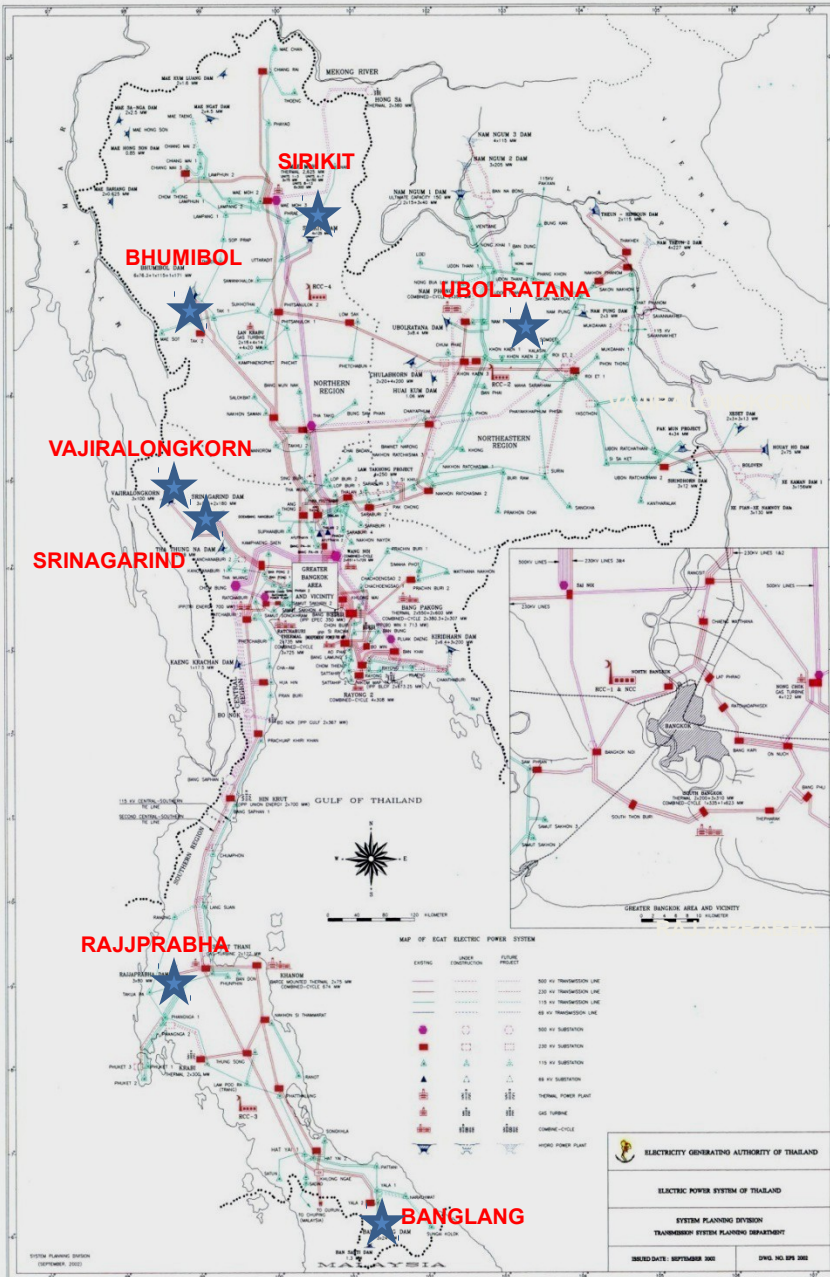
-243 stations in
Chaingmai



Web site
broadcasting

ข้อมูลเบื้องต้น	
เลขที่	12 (๒๕๕๖) ๒๕๖1 17-05-100
ชื่อ	
ที่ตั้ง	พื้นที่รับผิดชอบ ๒๕๖1 ๑๗-๐๕-๑๐๐
ประเภท	๒๕-4
พื้นที่รับผิดชอบ	๒๕-5
สถานะ	๐
วันที่ติดตั้ง	18.08
วันที่ตรวจ	

EGAT'S MAIN DAM



large	EGAT	Royal Irrigation Department (RID)
North	3	3
Central region.	-	3
Northeastern.	7	8
East	-	5
West	2	-
South	2	2
Total	14	21
small & medium		
North	16	51
Central region.	-	9
Northeastern.	1	222
East	-	47
West	2	7 -
South	1	31
Total	20	367
Total	34	388

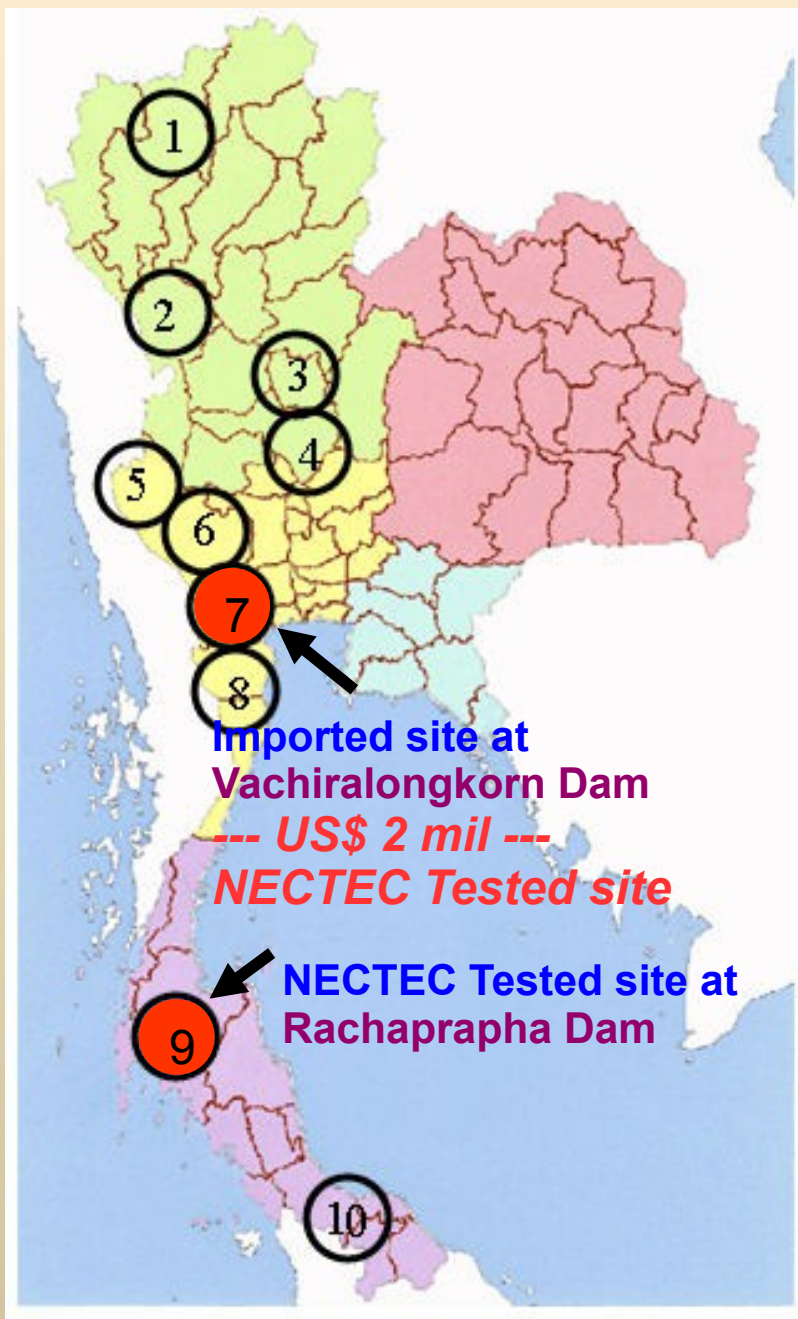
Is this a lake?



**Thailand's Worst
Crisis in 70
Years...**



Is it a canal?



- Conventional solution:

- * Periodic visual detection is a common method
- * Time consuming, large error and not real time

- Automatic Monitoring System:

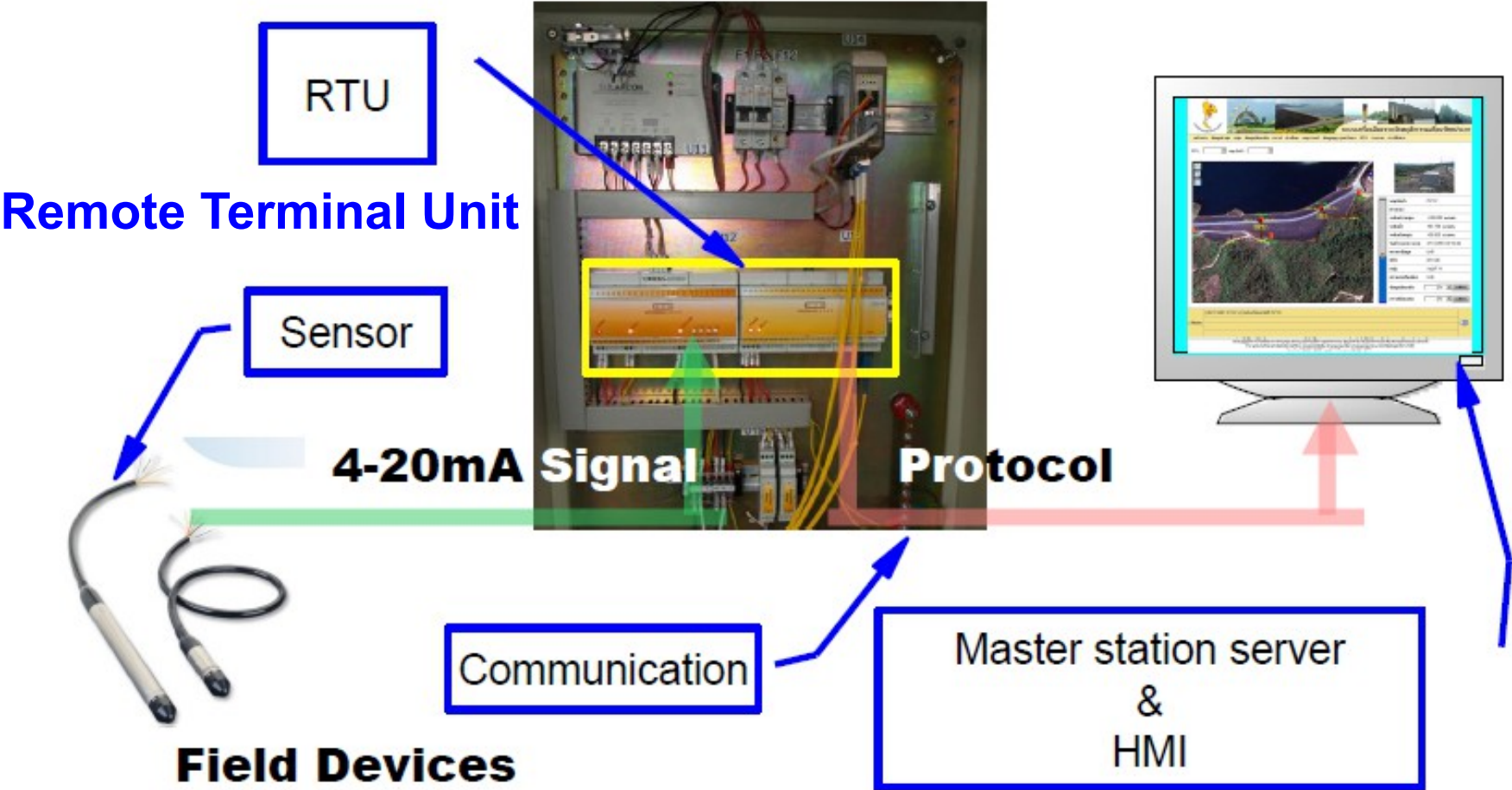
- * High accuracy, real time system, fast response
- * Imported system is very costly
 - + Inconvenient service & spare part delivery
 - + Lack of flexibility to modify the system
 - + Difficulty to expand to other dam

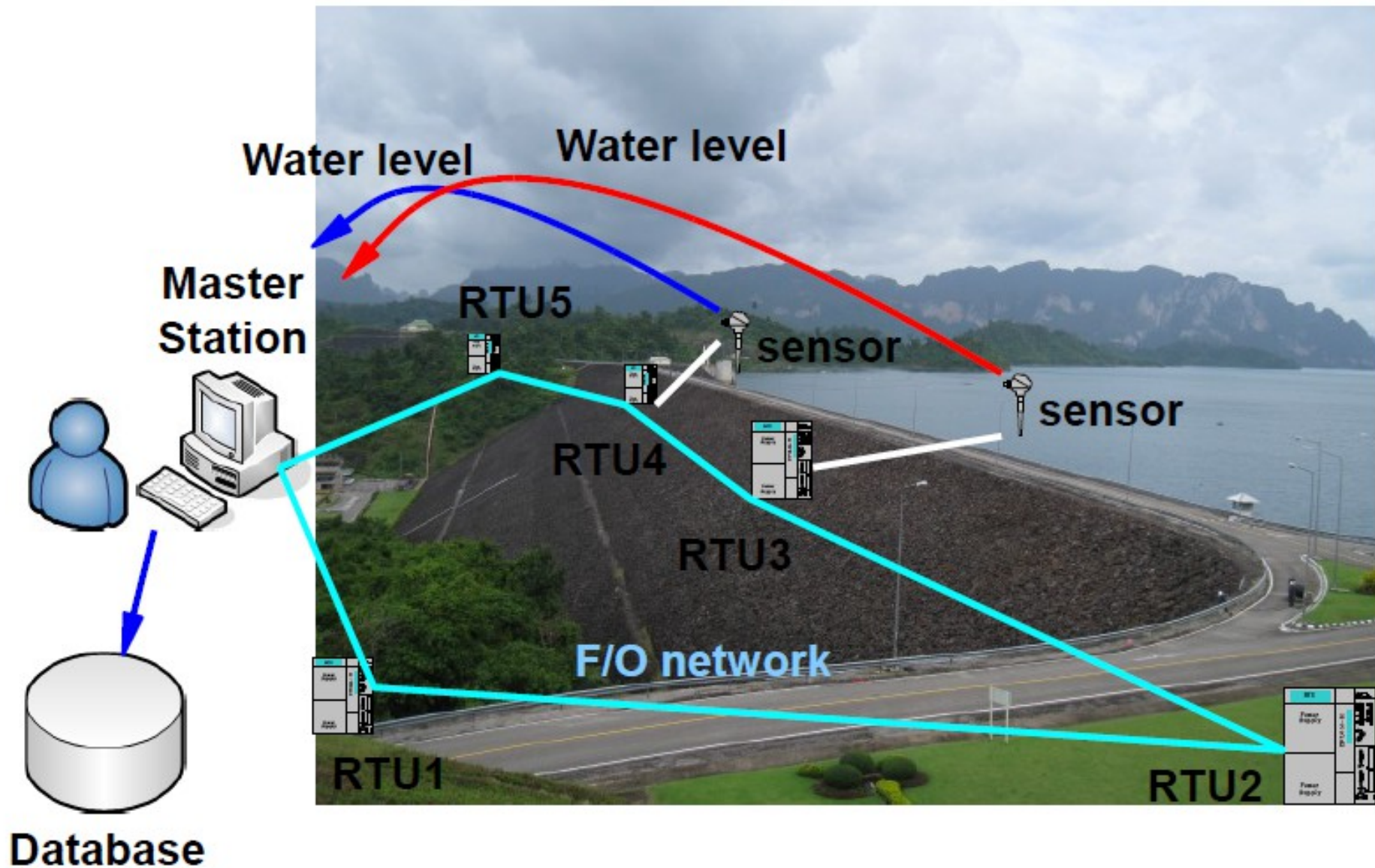
Major hydro power dams in Thailand

Hydro-Meteorological and Dam Instruments

Field Devices

Control Room Devices







A school in a quake-hit area that left more than 1,300 people dead or missing

Earthquake 8.0 M_s , more than 70,000 people died

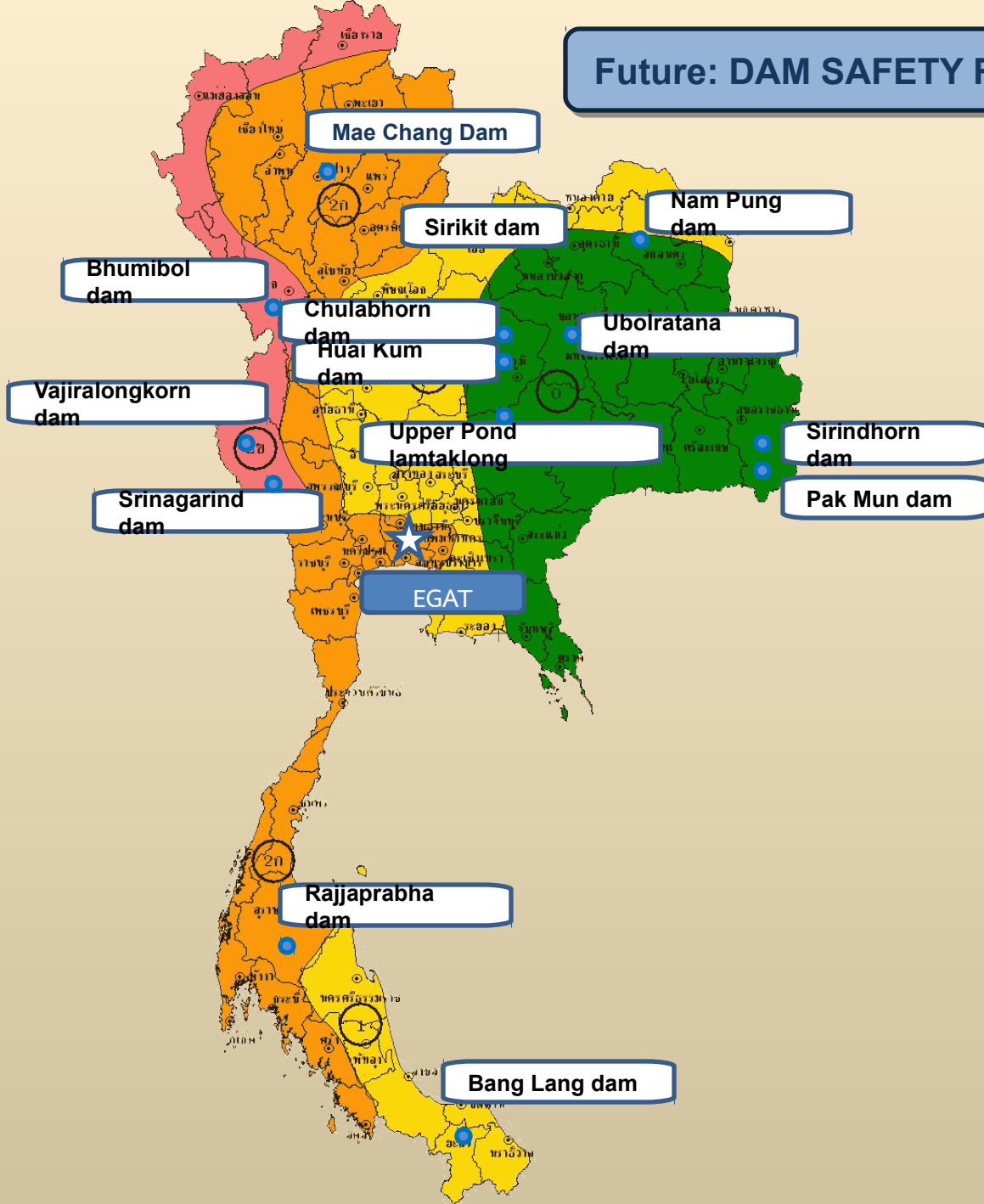
Seismometer Network



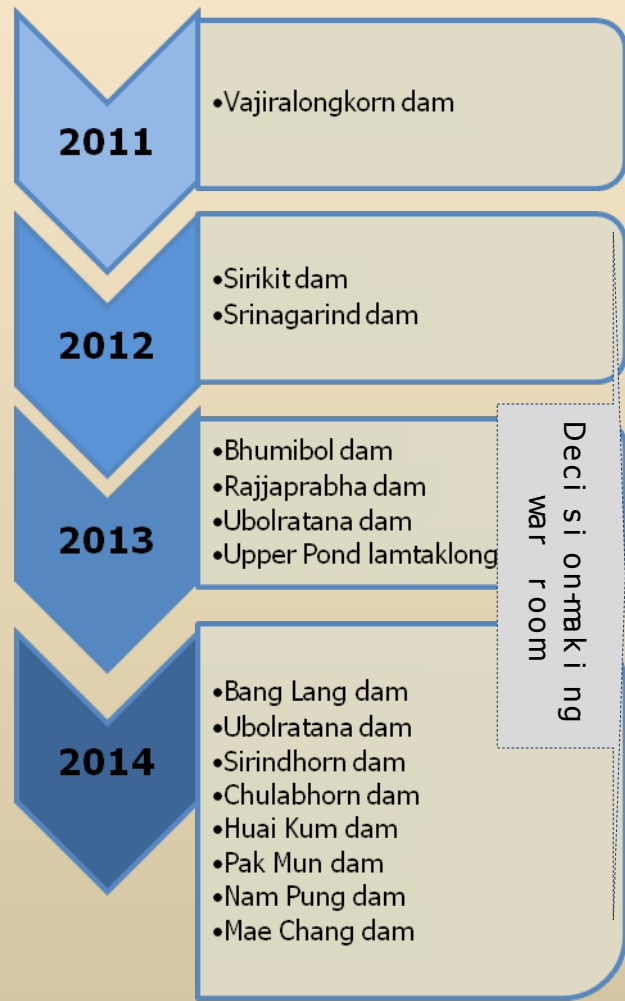
Technology Capability

a member of NSTDA

Future: DAM SAFETY REMOTE MONITORING SYSTEM



DS-RMS PLAN





Thank You for your attention

Question?