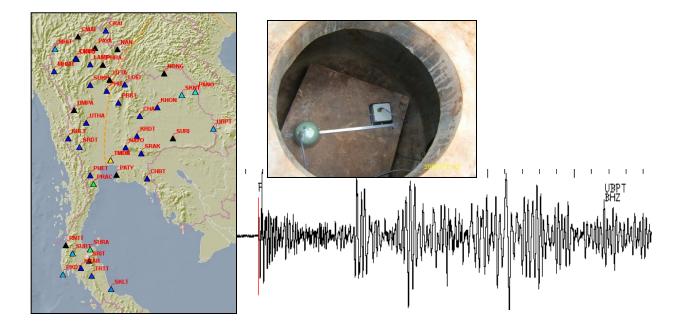


สำนักเฝ้าระวังแผ่นดินไหว กรมอุตุนิยมวิทยา ธวรพอนอตเอาปรายแกวงบ

# **TMD. Seismic Network**

www.seismologytund.goth Mr. 02-639-4547 . 02-639-0339



Patinya Pornsopin Seismological Bureau, TMD.

IRIS Workshop 8-14 Jan 2012, Bangkok



**Development of seismic network in Thailand** 

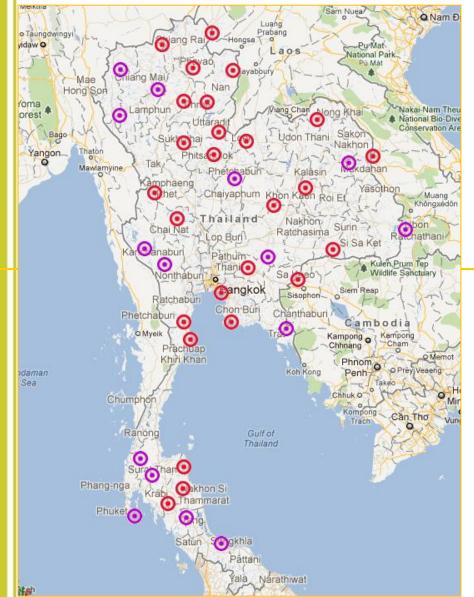
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- 1975 present 14 Analog Stations (SP 1s)
- 1998 2007 13 Digital Stations with L4-C, CMG-40 seismometors & SSA-320 accelerometors
- 2006(oct) present (Phase 1) 15 Digital Stations (8MP 40s & 7BB 120s) with Nanometric Trillium-40, Trillium-120 seismometors and TSA-100S accelerometors
- **2009(jan) present (Phase 2) 26 Digital Stations (15SP 1s, 10BB 120s and 1Borehole) with Geotech S-13, KS-2000M seismometors and PA-23 accelerometors**



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## **Real-Time Seismic stations**



## O Phase 1

- 15 stations (8MP 40s, 7BB 120s)
- Seismometors with Nanometric Trillium-40 & Trillium-120
- Dataloggers with Nanometric Taurus
- Sampling rate 100Hz
- Real time telemetry via (TCP/IP) Internet ADSL or IP-star satellite

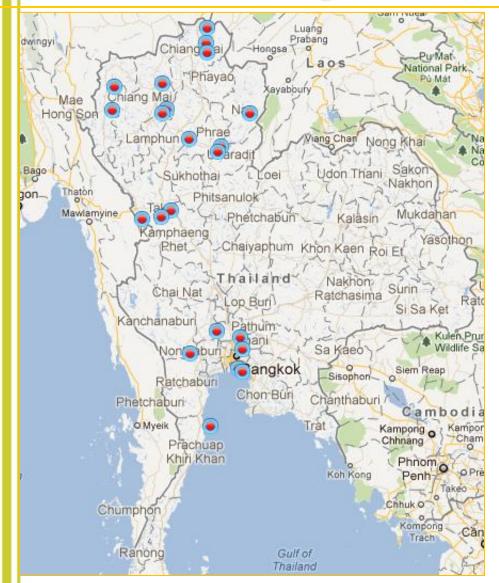
## O Phase 2

- 26 stations (15SP 1s, 11BB 120s)
- Seismometors with Geotech S-13, KS-2000 & KS-2000BH
- Dataloggers with Geotech Smart-24
- Sampling rate 50Hz for SP and 100Hz for BB
- Real time telemetry via (TCP/IP)
  Internet ADSL or IP-star satellite



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## **Strong motion acceleration stations**



### 26 strong motion station

• 6 stations with TSA-100S + Taurus

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- 20 stations with PA-23 + Smart-24
- Sampling rate 100Hz
- 3 components
- Data transfer via Dial-up modem



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## **PBKT Seismic stations**





## **Real-Time Data Acquisition**

- Data acquisition by NAQs, SmartGeoHub and SeisComP3
- Daily ~2.0 GB of 6 channels 100, 50 Hz from 41 permanent seismic station (seiscomp3)
- Archive of continuous data on harddisk



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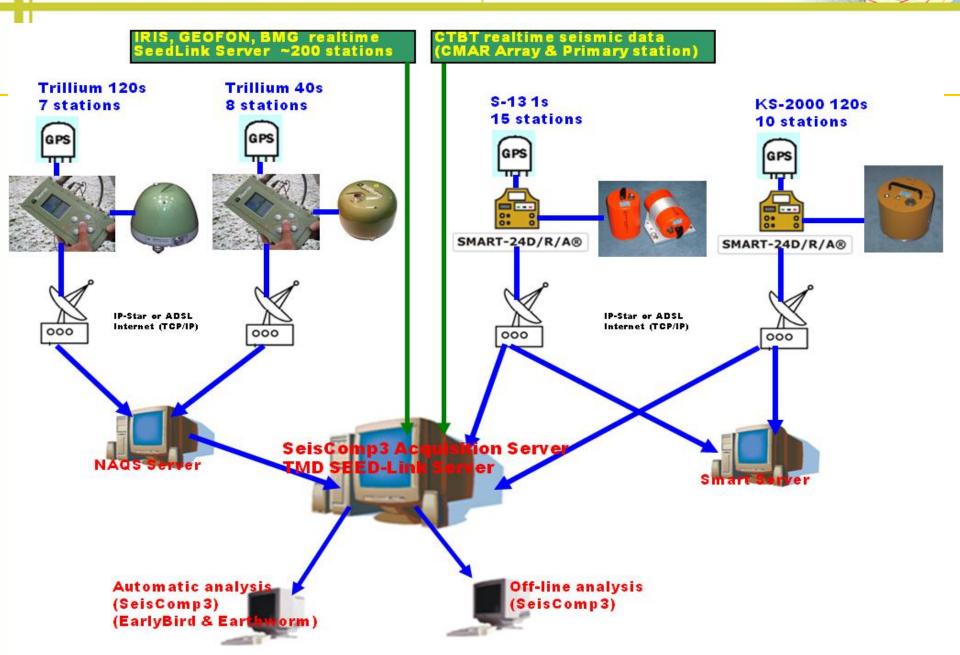
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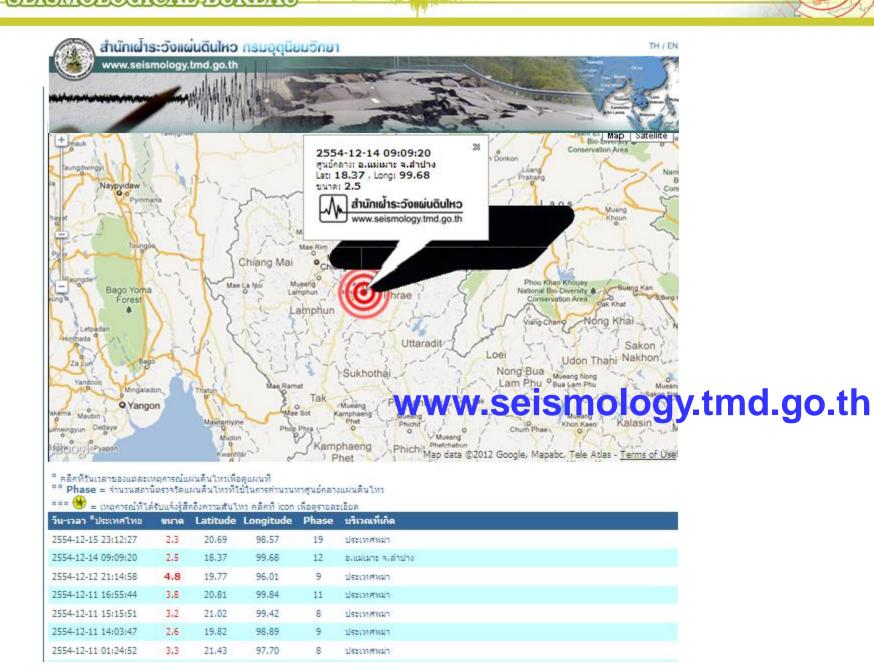
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## TMD share data for IRIS DMC

**IRIS DMC MetaData Aggregator** 

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#### Network summary (1 time span)

Network TM :: Thai Seismic Monitoring Network :: TM Network Map

Start Year 2008

Usage

IRIS

MDA

End Year 2500

#### Stations for TM network 2008 to 2500 (11 stations)

Station	Site	Latitude	Longitude	Elevation	First start	Last end
A CMAI	Nakompanom Station, Thailand	17.15	104.61	135.6	2009/01/01	2599/12/31
RA CMMT	Chiengmail Station, Thailand	18.81	98.95	399.7	2009/01/01	2599/12/31
RA LOEI	Loei Station, Thailand	17.51	101.26	305.6	2009/01/01	2599/12/31
RA MHIT	Mae Hongson Station, Thailand	19.31	97.96	270	2009/01/01	2599/12/31
A PANO	Nakompanom Station, Thailand	17.15	104.61	135.6	2009/01/01	2599/12/31
RA PBKT	Phetchabun Station, Thailand	16.57	100.97	8	2009/01/01	2599/12/31
RA PHRA	Phrae Station, Thailand	18.50	100.23	186.8	2009/01/01	2599/12/31
RA SKLT	Songkhla Station, Thailand	7.17	100.62	14.5	2009/01/01	2599/12/31
RA SRIT	Nakonsritamarat Station, Thailand	8.60	99.60	58.5	2009/01/01	2599/12/31
RA TMDB	BangkokBB_BH_low_level Station, Thailand	13.67	100.61	-47	2009/01/01	2599/12/31
RA UBPT	Ubonrachatani Station, Thailand	15.28	105.47	120	2009/01/01	2599/12/31



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# Thank you for your attention

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