



RTC-TH Nov 2012 Update

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Community-based environmental education for the self-sufficiency and sustainability of small rural family farms

ชุมชนตามสิ่งแวดล้อมศึกษาเพื่อการพึ่งตัวเองและยั่งยืนชนบทขนาดเล็กครอบครัวฟาร์ม

You may post questions / comments to the Discussion area of our website

www.neighborhoodlink.com/org/rtcth

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Greg Goes to MyGAREC 2012

Greg Lee, RTC-TH co-founder and creator of MEWS (Mobile Emergency Weather Station) is going to MyGAREC 2012. MyGAREC (Global Amateur Radio Emergency Communications) 2012 is an international conference. It is scheduled for 12-14 Nov in Kuala Lumpur, Malaysia. Choy (9W2PCK) and his radio club invited Greg to conduct Basic MEWS training. They are inviting local hams and



scouts to participate.

The training is set for 11 Nov 2012, a day before the conference. It will take place at their club bungalow (9M4CPK; see photo below) Sunday morning, 10:00 AM. This is where Choy's radio club is hosting Greg.

Greg will conduct a "Quick Start Basic MEWS: training session. This is a bare bones training that enables hams to crawl out from under the rubble, set up, make weather observations, and make reports on the air. It also enables

hams to teach Basic MEWS observation methods to interested survivors. The idea is to empower survivors to actively participate in helping relief operations.



9M4CPK bungalow: Greg's home for MyGAREC 2012

Many disaster survivors are shocked and depressed. They often feel and act as "helpless victims". Involving them in Basic MEWS observations gets them active and to produce tangible results. This helps speed their recovery and well-being.

Ham radio is an international community. The road to MyGAREC 2012 was not a solitary one. It was the direct and indirect actions of various people and

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groups over the past 1 ½ years. Meet some of the folks who helped along the way.

MEWS was announced in April 2011. Greg sent a letter to RAST and ARRL announcing MEWS as a Thai New Year's gift to all hams. He also sent copies of the announcement to IARU (International Amateur Radio Union) national member organizations for which he could get email addresses. In the ham radio traditions of public service and international humanitarianism, the lessons were made free for private, educational, and non-commercial use.



Costa Rica



Germany



India



Kenya



Mexico

Radio groups from these countries (in alpha order) replied to the emailed MEWS announcement.

Terry (KF7E, QRZ.com editor) and Don (N4UJW, creator and webmaster of Hamuniverse.com) used their websites to help publicize MEWS to hams worldwide. They deserve special thanks.

Mark (NWØF) read about MEWS on the QRZ.com website. He and Greg began to exchange emails on weather observing topics. About a year later, Mark saw the announcement for MyGAREC 2012. He urged Greg to



Terry, KF7E
Editor, QRZ.com



Don, N4UJW
Hamuniverse.com creator



Phat, HS1WFK
Elmer, Letter of Support



Mark, NWØF
Initiator, Letter of support

attend and to promote MEWS at the conference. He might be considered the prime mover.

Greg's family budget constraints did not permit attending MyGAREC 2012. But he sent an email introducing MEWS to the conference organizers asking their help to promote it. Greg also asked Phat (HS1WFK) and Mark (NWØF) to send letters of support to the organizers.

Choy (9W2PCK) replied with a promised to do what he could to promote MEWS to the MyGAREC 2012 steering committee. Meanwhile, he discussed MEWS with his radio club members. They felt MEWS was touching on "new territory" and the conference attendees should have an opportunity to learn more about it. They decided to invite Greg to hold a pre-conference training session.

Choy's club offered to host him if he could get to Kuala Lumpur. Anonymous donors then came into play. They offered to pay the air fare to get MEWS to MyGAREC 2012. Hats off to the Malaysian hams for going the extra mile for MEWS!

In order to keep to a 2 hour time frame, Greg modified the MEWS introductory orientation presentation for MyGAREC 2012. He chose to use a "Quick Start Basic MEWS" training option. This compressed the 8 Basic MEWS lessons into a single session. Quick Start training is short on theory and long on practice.



Greg, HSØZHM
MEWS Author/Creator



Choy, 9W2PCK
Key Malaysian contact

Emphasis is on the bare bones mechanics of weather observations needed to make a systematic minimal Basic MEWS report. The scenario is designed for a ham who survives a disaster to get on the air and send out weather reports immediately. Hams getting Quick Start training can teach it to other survivors. This empowers survivors to become active in their own rescue. It helps overcome the “helpless victim” feeling experienced by those who suffered the awesome power of nature.



General MEWS introductory PowerPoint.

Quick Start Basic MEWS training

All the training materials for Quick Start Basic MEWS training are on the www.neighborhoodlink.com/RTC-TH_Tech/pages website.

MyGAREC 2012 Quick Start Basic MEWS Training
(Downloads)

- [1 Things to do BEFORE the Quick Start Basic MEWS Training](#)
- [2 MEWS program description submitted to MyGAREC 2012](#)
- [3 MEWS Overview PDF slide show submitted to MyGAREC 2012](#)
- [4 Intro to Basic Level MEWS Lessons](#)
- [5 RTC-TH MEWS Weather Observer Handbook \(2012 Ed\)](#)
- [6 Quick Start Basic MEWS Training Lesson Plan](#)
- [7 2012 RTC-TH Quick Start Basic MEWS Training MyGAREC](#)
- [8 Optional Fast Pack Quick Start Basic MEWS](#)
- [9 Quick Start Basic MEWS Learning Log & Evaluation Forms](#)

For more details, trainees can get the free Basic MEWS lessons and refer to the Handbook. All 8 Basic MEWS lessons were updated. So be sure to look for the 2012 Edition of those lessons.

Initially the 2012 updated lessons are posted under the “New Postings They will remain there through Nov. In Dec, both the Quick Start Basic MEWS and the

MEWS 2012 updated lessons will be moved to the MEWS section of the website.

Feedback from MyGAREC 2012 will be reviewed. An assessment will be made and consideration given for making future lesson revisions. We are always interested in improving the quality of our training materials.

MEWS was designed for individual or small group self-study. The slide shows were intended for viewing on a computer screen. If the slide shows are used in a large classroom setting, a narrator is needed to read some of the text intensive slides. Tutoring is available via email, Echolink®, or Skype. The latter 2 options have conferencing capability. If a local EchoLink® goes through a repeater, a net can be formed. MEWS tutoring can be given to a larger group. All tutoring by internet needs to be scheduled in advance. Email Greg hs0zhm@gmail.com with suggested days / hours. Remember, his station operates on “Golf” Time (UTC +7).

New Postings This Month

- [B1 MEWS Temperature Measurement \(2012 Ed\)](#)
- [B2 MEWS Estimating Wind Speed \(2012 Ed\)](#)
- [B3 Measuring Wind Direction \(2012 Ed\)](#)
- [B4 Estimating Cloud Cover \(2012 Ed\)](#)
- [B5 MEWS Estimating Cloud Base Height \(2012 Ed\)](#)
- [B6 MEWS Identifying Cloud Types \(2012 Ed\)](#)
- [B7 MEWS Estimating Visual Range \(2012 Ed\)](#)
- [B8 MEWS Severe Weather Conditions \(2012 Ed\)](#)

RTC-TH training methods use a Community-based education model developed by Greg. This is education “from, to, by the people.” Teachers are people in the community who have knowledge and skills they are willing to share. Students are those who are willing to learn and “self-select” to attending training opportunities. Greg has a saying: “All teachers should be students, and all students should be teachers.” Anyone receiving training should be willing to share it with others.



The HSØZHM EchoLink® station (node 520300)

There are no written exams. Students show they mastery by teaching back the lessons they learned to other students. This is wholly consistent with the ham radio tradition of becoming an “Elmer”. In Greg’s cyclic system of teachers being students being teachers, learning is a life-long process. The Quick Start Basic MEWS training at MyGAREC 2012 exposes the trainees to this practical method of community-based education.

Anyone who knows Greg can attest to the high energy, “vitamin enriched, fortified”, super saturated, highly concentrated, and integrated lessons in his teaching.

Mark (N7YLA) is the unsung hero of MEWS. He is responsible for getting Greg to become a ham. Mark and Greg were teaching colleagues. They shared an interest in weather science. He co-founded GERC (Glendora Emergency Response Communications, a local EmComm group) and introduced Greg to EmComm.



*Mark, N7YLA
Greg's original Elmer*

Mark and the ham traditions of public service and EmComm inspired Greg. As a relatively new and inexperienced ham, Greg wanted to make a contribution. The idea for MEWS was born after Greg studied the aftermath of various international EmComm efforts. He saw a way to increase the value of ham EmComm volunteers by teaching them to make weather reports with an eye to helicopter VFR operations.

After moving to Thailand, Greg met Phat (HS1WFK) and was inspired by his dedicated efforts in developing Thai ham EmComm. Greg’s conviction about MEWS grew deeper when several Thai helicopters crashed in the mountains along the Thai-Myanmar (Burma) border.

Greg began writing the MEWS lessons in Fall 2009 during his spare time. The specific examples for the lessons deal with his location in the northern Thailand (Nan Province). Knowledgeable hams can readily adapt the lessons to their local environment by getting climate data and disaster news stories from local papers and news media. He finally completed the 3 introductory, 8 Basic level, 6 Advanced level lessons and the MEWS Handbook in Apr 2011 just in time for Thai New Year.

Strive to be part of the solution rather than part of the problem.

In the spirit of amateur radio, all MEWS lessons are offered free to hams for individual, educational, and non-commercial use.



MEWS increases the value of EmComm ham volunteers

Before the MEWS lessons were completed, Greg realized the need for emergency preparedness education. So he began developing a series of 12 lessons to cover common local disasters. Following the severe Thai flooding in 2011, a government report pointed out the “lack of disaster preparedness education” contributed to the suffering of the survivors. To date, 8 of the 12 emergency prepared lessons are complete and posted to the same website as the MEWS lessons.

It's hard to say when the remaining 4 lessons will be completed. Greg works on them in his spare time and for no pay. The RTC-TH is an informal, all volunteer community-based organization. It receives no government or outside funds. Volunteers self-fund all activities. No one gets a salary or stipend. The RTC-TH does not see “money as the solution to the problem”. If you won't spend your own money on your idea, how can you expect others to pay you to do it? The RTC-H operates on the principle of “mutual respect, mutual benefit”. This is truly a grass-roots educational effort “from, to, and by the people”.

Can You Help Translate MEWS Lessons to Your Language?

You can be a part of helping to get MEWS into the hands of more EmComm hams worldwide. Email Greg, HS0ZHM (hs0zhm@gmail.com). Full credit will be given for your translation efforts. Take the opportunity to build your resume and perform meaningful community service to the EmComm amateur radio operators in your country. Help perpetual the ham radio traditions of public service, international understanding, and friendship.

Our Rice Harvest: Part 2



The 28 bags of dry land rice in the pasture area has been harvested, threshed, dried, and stored.

We completed harvesting the dry land rice in the pasture area. The yield was 31 bags (-3 to the threshing crew). Now our attention shifts to the wet paddy rice.



The rice is cut and laid to dry for a few days.

The upper paddies, closest to the fish ponds have ripened first. So that's where the cutting started.

After the sheaves dry for a few days, they are gathered for stacking. The sheaves are stacked with the rice heads to the center. When the upper paddies are done, we are ready to thresh. It's all manual labor as it was centuries before. 🌐



The dried sheaves are put onto a "".



About 6-8 sheaves are carried at a time.



They are stacked with the rice heads to the middle.



A cover protects the center of the stack from rain.

Dry Season Prep: Teak Sawdust Test



We got a free batch of teak sawdust for a mulching trial.

Our corn cob mulch idea turned to dust when we found they attracted too many termites in some areas of the orchards. So we continued our search for a mulch for the coming dry season. A prime consideration was fire protection (in addition to weed suppression and soil moisture retention).

Our teak logging connection suggested trying teak sawdust for mulch. Sawdust smolders when it burns. It doesn't burn with an open flame. The slow burning buys us time to fight the fire.



For this trial, we want to see how thick a layer of teak sawdust is needed to keep down the weeds. Along the driveway, we put a 15 cm thick mulch ring around some of the trees. In the garden and flower beds, Mom put down a 5 cm thick layer of teak sawdust. Now we sit back and wait to see what happens. The small particle size of the sawdust may compact to make an effective sunlight barrier.

Meanwhile, we continue with plans to use the rice straw to mulch other areas of the farm. And we also continue our quest for a better mulch. 🌐



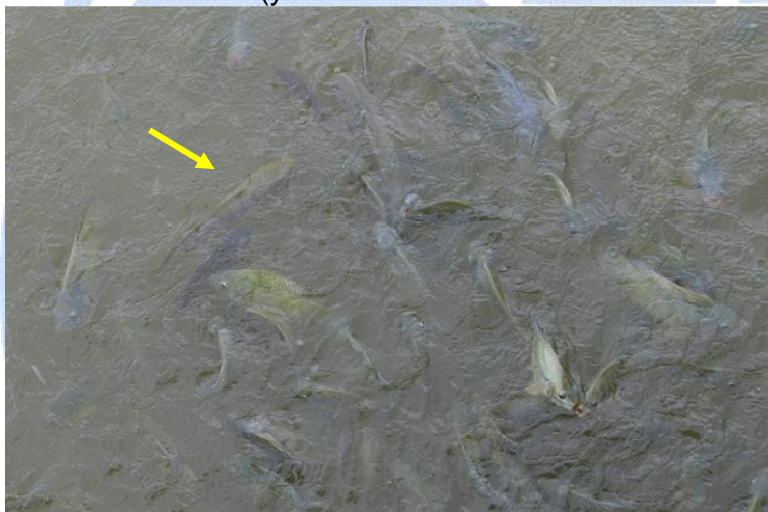
Mom applying teak sawdust in our garden mulching trials.

Our Fish Ponds: Fun, Food & Cash

Our farm fish ponds are the key to the water supply for our rice. But they are also a source of fun and food.

A typical morning begins with feeding the fish. We use a combination of natural vegetation and insects on the farm with some commercial feed. The feeding frenzy set off by the tapping of the feed bucket and the first bits of food is fun to watch.

One morning we were surprised to see some “snakehead fish” (yellow



arrow in the left photo) show up among the tilapia during a feeding session. These fish are carnivorous predators and take a toll on smaller fish. Some Thais consider them a delicacy.

We enjoy fishing as both recreation and getting our own meal. We can cut and make our own bamboo fishing pole. It is just a short walk to find the bamboo on our farm.



We buy fish hooks and nylon fishing line from the store. Bait can be grasshoppers, worms, or left over sticky rice. Then we just have to find a nice spot to drop our hook in the water. We wait for the fish to bite. If they don't, we just relax and enjoy the calm. The peace and tranquility of the farm surrounds us. With some luck, there will be excitement when we feel something on the line!





The fish tank at Mom's in Ban Na Fa.

We set up a small fish tank at Mom's behind the garage. We can stock the tank with fish we catch on the farm. This way the fish are fresh until we want to eat them. There is an air pump on standby. If we need to, we can turn on the pump to aerate the fish tank. We also have the option to sell the fish. Mom's house is the next to the bridge. Farmers coming home from their fields pass by daily. We can put sign by the driveway to let people know they can buy fresh fish.



A tilapia in the tank awaiting its fate.

Small rural family farms without fish ponds should consider building a small tank to raise fish. It is easy to do, low cost, and gives them another source of fresh food and protein. Many Thai people like to eat catfish. They can better tolerate the water conditions of small ponds and tanks. Catfish are omnivores; they eat both plant and animals. So it is easy for farm families to find food on the farm to feed the fish. They don't need to spend money to buy commercial fish food. And like us, if the family has extra fish, they can barter them or sell them.

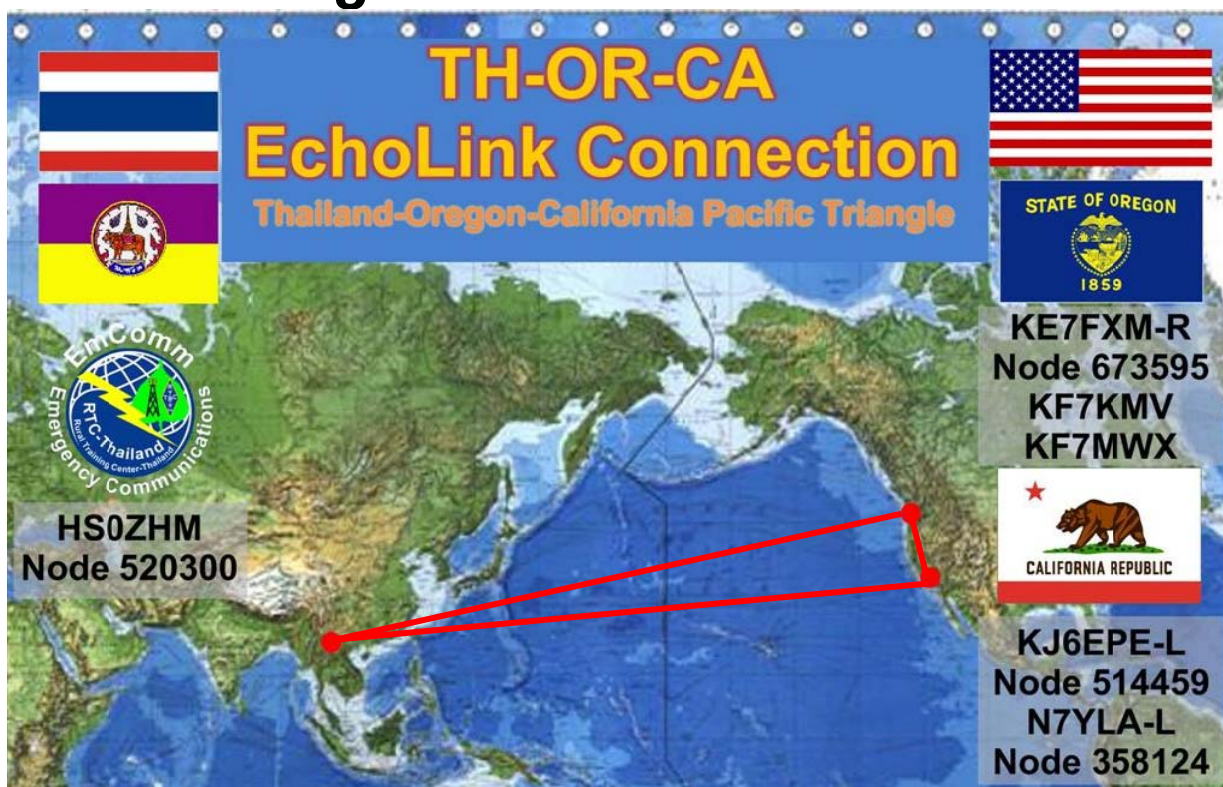


Small catfish ponds in the backyard of our town property

We have 2 small fish ponds in the backyard of our business location in town. It is common practice for small employers to furnish lunch for employees. So to reduce business costs, we grow vegetables, fruit, and raise catfish at the business. We bring rice and other fruits and vegetables from the farm. All of this reduces the amount we have to spend for food in the market.

There is no telling if others will follow us on our path toward the sustainability. If they do, we consider it a bonus. Our goal is to try to follow the King's Theory of the Self-sufficiency Economy: to live as sustainably and as self-sufficiently as is practical for our circumstances. (Yes, we do buy some things in the market.) Teaching by example has proven to be one of the more effective teaching methods. So we decided to live a sustainable life rather than just reading, thinking, and talking about it. "Think much, say little, do more" is the RTC-TH approach. 🌐

Crossing the Pacific with TH-OR-CA



The THORCA (Thailand – Oregon – California): A Trans-Pacific Triangle EchoLink® Connection

This is another example of how “networking is better than not working.” Mark (N7YLA) encouraged Greg to explore the use of EchoLink®. This is as an alternative means to HF amateur radio to keep in touch from Thailand. Greg used it to join the GERC radio net run by Mark. This started the Thailand-California leg of the trans-Pacific connection.

Three Oregon hams joined the GERC Net one evening. Hap (KF7KMV), Pat (KF7MWX) and Jimmy (KE7FXM) connected via Jimmy’s node. This forged the Oregon-California leg of the triangle.

During the Net, Pat mentioned an opportunity to demonstrate EchoLink® to their radio club. Greg volunteered to call him for the demo. A few weeks later, Greg connected to Jimmy’s node in Oregon. Pat and Greg were talking when Dick (KJ6EPE) from southern California called Pat.



Mark, N7YLA



Greg, HS0ZHM



Hap, KF7KMV



Pat, KF7MWX



Jimmy, KE7FXM



Dick, KJ6EPE

Since then, the friendships forged from these EchoLink® connections have grown. This is what ham radio is all about. The TH-OR-CA trans-Pacific Triangle goes from west to east, then north to south.



Jim (KG6TQT)



Frank (KG6TQV)



Dennis (KI6NQG)



Lou (K6LPB)

Other southern California hams join one or more of the nodes in the TH-OR-CA connection. Jim (KG6TQT), Frank (KG6TQV), and

Dennis (KI6NQG) are regulars on the GERC Net. Lou (K6LPB) called Greg's node out of the blue one day. Since then he's made frequent contact (though not on a regular schedule).

Other hams in Thailand connect to TH-OR-CA. George (HSØZAZ) is also retired in Thailand. George has occasionally joins the GERC Net. He's also connected to the Oregon hams a few times with Greg.



George, HSØZAZ

Other hams beyond the Trans-Pacific triangle connecting to TH-OR-CA who are associated with Mark's GERC Net



George, KC9TIJ, Indiana



Jens, DL1BRJ Germany



Tom, DB7BST Germany

George (KC9TIJ) is in Indiana. He is a regular on the GERC Net.

Jen (DL1BRJ) and Tom (DB7BST) have often supported GERC JOTA (Jamboree On

The Air) EchoLink® activities from Germany. Consider the time zone differences between these stations. Then you begin to appreciate the quality of the friendships forged among hams. GERC community activities often occur during normal daylight hours. The hams in Germany are operating in the late afternoon and early evening. Thai based hams are on the graveyard shift.

The TH-OR-CA EchoLink® Node Stations



Greg, HSØZHM, EchoLink® node 520300



Mark N7YLA-L, EchoLink® node 358134

Mark (N7YLA) recently upgraded his EchoLink® system. He can now conduct the GERC Net (via cross-band repeater) on VHF, 146.715 MHz and UHF 445.940 MHz, - offset, PL 151.4 and EchoLink®. This means local hams in Glendora can use their VHF or UHF radios to call Mark's station. They can also connect via internet by computer, smartphone, or by inputting DTMF codes on their radios.



Jimmy KE7FXM, EchoLink® node 673595

Jimmy's node is connected to the Port Orford Repeater (see photos on the left and below) K7POH; 147.200 MHz, + offset, PL tone 118.8. Hap and Pat are in Gold Beach, OR (about 25 mi south). They access EchoLink® Jimmy's node via the Port Orford Repeater. Jimmy, Pat, and Hap also use smart phones and can use EchoLink directly by wireless access.

Local Oregon hams in range of the K7POH repeater can use Jimmy's node when it is activated. The Port Orford hams conduct a weekly net on Wed

evenings, 1900 Pacific time. Visit their website (www.gsl.net/k7poh) for details. Look for the "2 m Project" to see the photo story of their 2m VHF repeater shack being built from the ground up.

As you can imagine, they are challenged with rain and wind to keep their repeater working and dry.

Dick lives in warm, sunny, southern California. His node is unique. It is a VHF link node with a DIY (Do It Yourself) cross band repeater using GMRS (non-ham) radios. With few hams in the neighborhood, Dick forged a volunteer group to help watch for arsonists using GMRS radios. Living in the Santa Ana Mountains, brush fires are a major



The K7POH shack



K7POH, the Port Orford Repeater



Dick, KJ6EPE, EchoLink® node 514459



The KJ6EPE VHF-GMRS cross band repeater and solar panel



It's a "Do It Yourself" compact, lightweight repeater system

community concern.

Dick is a completely "outside the box" type thinker. His EchoLink® node is in the "box" (home). He runs it from the great outdoors on foot or bicycle talking with us in Thailand using only his HT or smart phone. 🌐