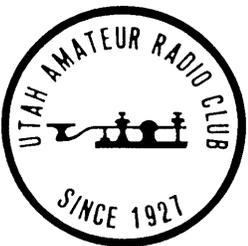


We will now be meeting in the new **Warnock Building (Room 1230, "Duke Classroom")** just to the east of the Engineering and Mines Build-

### October Meeting Topic: Homebrew



Volume 50, Issue 9, October 2007

Periodicals Postage

# The Microvolt

**DATED MATERIAL – PLEASE DO NOT DELAY**

**SEND TO**

Please Send Dues to:  
 UARC  
 c/o Dick Keddington  
 1933 Woodside Drive  
 Holladay, UT 84124-1632

The Microvolt (USPS 075-430) is published monthly except August for \$17.00 per year or \$1.50 per issue by the Utah Amateur Radio Club, 3666 South State Street, Salt Lake City, UT 84115-4848. Periodicals Postage Paid at Salt Lake City, Utah. POSTMASTER: Send address changes to The Microvolt, Dick Keddington, 1933 Woodside Drive, Holladay, UT 84124-1632.

## Prologue

The Utah Amateur Radio Club was organized under its present name in 1927, although its beginnings may date back as early as 1909. In 1928, it became affiliated with the American Radio Relay League (club #1602) and is a non-profit organization under the laws of Utah. It holds a club station license with the call W7SP, a memorial call for Leonard (Zim) Zimmerman, an amateur radio pioneer in the Salt Lake City Area.

**Meetings:** The club meets each month except July and August. The meetings are held on the first Thursday of the month at 7:30 PM in the University of Utah Engineering and Mines Classroom (EMCB) building, Room 103.

**Membership:** Club membership is open to anyone interested in amateur radio; a current license is not required. Dues are \$17 per year, including a *Microvolt* subscription. *The Microvolt* and membership cannot be separated. Those living at the same address as a member who has paid \$17 may obtain a membership without a *Microvolt* subscription for \$9. Send dues to the Club Secretary: Dick Keddington, KD7TDZ, 1933 Woodside Drive, Holladay, UT 84124-1632. ARRL membership renewals should specify ARRL Club #1602.

**Contributions:** Monetary contributions are gladly accepted. Send directly to the Club Treasurer: Chuck Johnson, 1612 W. 4915 S. Taylorsville, UT 84123-4244. For in kind contributions, please contact any board member to make appropriate arrangements.

**Repeaters:** UARC maintains the 146.62- and 146.76- repeaters. The repeaters are administered by the UARC Repeater Committee. Comments and questions may be directed to any Committee member. The Lake Mountain repeater (146.76-) has autopatch facilities for Provo which are currently disabled due to abuse and for Salt Lake which is in need of reworking to be compatible with IRLP

**Ham Hot-Line:** The Utah Amateur Radio Club (UARC) has a Ham Hotline, 583-3002. Information regarding Amateur Radio can be obtained, including club, testing, meeting, and membership information. If no one answers leave your name, telephone number and a short message on the answering machine, and your call will be returned.

**Publication:** *The Microvolt* is the official publication of the club. Deadline for submissions to the *Microvolt* is the 10th of each month prior to publication. Submissions by email are preferred (uarc@xmission.com), but other means including diskettes and typewritten submissions can be mailed directly to: Telvin Mills, 6864 Beargrass Rd., West Jordan, UT 84084. All submissions are welcome but what is printed and how it is edited are the responsibility of the Editor and the UARC board. Reprints are allowed with proper credits to *The Microvolt*, UARC, and authors. Changes in mailing address should be communicated to the Club Secretary: Dick Keddington, 1933 Woodside Drive, Holladay, UT, 84124-1632.

## UARC 2007 Board

President: John Brewer, N7MFQ	(435) 837-5646
Executive: VP: John Hays , K7VE	446-1899
Vice Pres: Gordon Smith, K7HFV	582-2438
Secretary: Dick Keddington, KD7TDZ	274-9638
Treasurer: Chuck Johnson, WA7JOS	268-0153
<i>Microvolt</i> Editor: Telvin Mills, KB6BYU	968-5089
Asst. <i>Microvolt</i> Editor: Bob Rollins, WB7DPA	942-2638
Program Chair: Dale Heisler, WJ7L	278-6458
Program Chair: Linda Reeder, N7HVF	364-7006
Imm. Past Pres: Roy Eichelberger, W7ROY	571-2447

## Committee Chairpersons and Members

"Book Lady": Fred Desmet, KI7KM	485-9245
Historian: Ron Speirs, K7RLS	968-4614
Field Day Chair: Andrew Madsen, AC7CF	466-0744
Steak Fry Chair: Jed Petrovich, AD7KG	566-6277
Club Trustee: Brett Sutherland, N7KG	298-5399
Engineer: Randy Finch, K7SL	277-7135
ATV Engineer: Clint Turner, KA7OEI	566-4497
Board Liaison &	
Autopatch Engineer: Gordon Smith, K7HFV	582-2438
Provo Autopatch Host &	
ATV Engineer: Dale Jarvis, WB7FID	224-3405

## IRLP Information

For information on using the club's IRLP node on the 146.76 repeater, check <http://www.utaharc.org/irlp>.

For late breaking news listen to the UARC Information Net Sundays at 21:00 on 146.62 or set your browser to: [www.xmission.com/~uarc/announce.html](http://www.xmission.com/~uarc/announce.html)

We are grateful to the management of XMission, our Internet Service Provider (ISP), for the donation of this Web-Page service.

For account information go to:  
<http://www.xmission.com/>  
Or call 801 539-0852

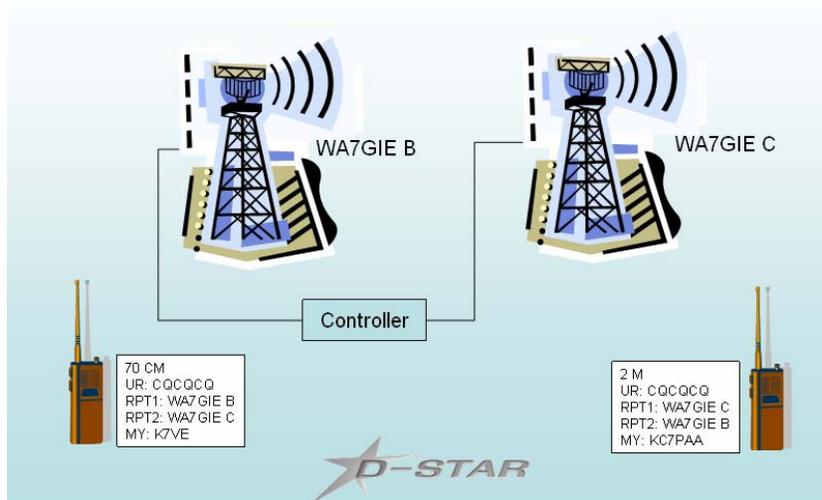




## September Meeting Recap

John, K7VE, gave us a presentation on D-Star at the September meeting. The presentation can be downloaded from the UARC web site. Below is an illustration of a typical D-Star setup and some website links for more information:

### Zone Repeater Illustration



### Websites

- <http://www.dstarusers.org>
- <http://groups.google.com/utah-d-star-users>
- <http://www.icomamerica.com>
- <http://www.icomamerica.com/support/forums/>
- <http://groups.yahoo.com/group/illinoisdigitalham>
- [http://groups.yahoo.com/group/dstar\\_digital](http://groups.yahoo.com/group/dstar_digital)
- <http://k7ve.ampr.org>
- And many more ...



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### Special points of interest:

- ♦ Next UARC Meeting  
October 4th—  
Homebrew
- ♦ UARC Club Officer  
Nominations—  
November 1st.
- ♦ Utah Hamfest—July  
12, 2008, Bryce  
Canyon

## Member of the Month

This month we are featuring Larry Jacobs, WA7ZBO, previous call, N7JHF. Larry has been in amateur radio since 1960. He has his General class license. It was Larry's father, Jim Jacobs, W7DBO, who got Larry interested in the hobby. Larry's father has his Advanced license. Larry's son, Jonathan, KC7WVP, has his Technician license.

Larry and his wife, Jackie have two children, one boy and one girl. They are all grown now. Larry and Jackie own and operate Jackie's preschool in Taylorsville. They have been doing this for 30 years. This is not a day care center; it is a private school and the children come three times a week to learn. Larry says he is in charge of all of the financial book keeping.

For many years Larry worked for the Union Pacific railroad as a locomotive electrician. Larry is now retired from the railroad.

When I asked Larry what his favorite thing about Amateur radio was he said he has many favorites. Larry enjoys working CW and phone. He likes to help with amateur radio in emergencies. Larry used to be the Utah Section Emergency Coordinator for eight years for the ARRL like Jerry Wellman, W7SAR, is now. Larry is now building new ham radio projects.

Larry loves direction finding.



In fact, Larry conducts a fox hunt every year. I was able to participate in the fox hunt that Larry had at the end of May this year with Scott Saunders, KE7IRO, and his wife, Mindy, and it was a lot of fun. Larry uses direction finding for solving problems such as radio interference. He has worked with the Civil Air Patrol. Larry has even helped the Union Pacific Railroad find locked radios.

Larry is a member of UARC. He was the President of UARC in 1979 when Bob Rollins, WB7DPA, was the Vice President. In 1992 Larry was the President of the VHF Society. He has been the chairman of WIMU for many years. Larry is currently the Utah representative for WIMU. For 10 years Larry served as the AMSAT state coordinator. Larry was also on the committee of the UARC information net when it was first started by Jerry Ben-

nion, WR7N, in April of 1989. Larry aired the Amateur Radio Newline which was then known as Westlink. He had it set up on a remote control in his basement. In the earlier days he used to air it on the 146.76 repeater. In the spring of 1990 Larry turned the Newline over to me. He said he had too many irons in the fire and I have been doing it ever since.

Larry, we really appreciate all of your contributions in amateur radio.

73, Linda Reeder, N7HVF

# APRS—How To Get Your Feet Wet—At No Cost!

By Russ, KB8DPN, Apr. 2007 *PCARS Newsletter*

APRS – Automatic Packet Reporting System is an amateur radio based digital communications system used for local, tactical, real-time exchange of information among all members of a net, including map based displays for situational awareness. It was developed by Bob Bruninga, WB4APR, who currently works at the United States Naval Academy.

## **Capabilities:**

APRS is used to transmit real-time information such as messages, bulletins, announcements and the locations of any stations or objects via amateur packet radio protocols. Real-time reporting of station position for mobiles is facilitated using the Global Positioning System. APRS is capable of transmitting a wide variety of data including weather reports, short text messages, radio direction finding bearings, telemetry data, and storm forecasts. These reports can be combined with a computer and mapping software to show the transmitted data superimposed on a variety of map displays.

I've been asked on several occasions on how to get started with the APRS system, and I think this is your roadmap on getting started, and what you have to do to start understanding and having fun.

## **How It Works:**

An object (Vehicle, House, Balloon, Weather Station, Weather Storm, Bicycle, etc.) has a location and uses amateur radio to automatically (or someone acting on behalf of the object) to send information, including the Longitude / Latitude of said object to other stations on the system.

In this article I will be focusing on how to set up a home monitoring station using the Internet that will allow you to participate in the network of APRS stations, send messages, view up to the minute weather data, and track moving APRS objects. All of these things could be quite useful in the event of an emergency situation to a net control station wanting to use the closest information or resources for a specific purpose.

The best part is that you'll be able to achieve all of this at little or no additional cost using your home computer, your internet connection, some free software and a little of your time to learn and play with the programs. Let's get started!

## **The Program(s):**

You'll be downloading a copy of a program called UI-VIEW. (<http://www.ui-view.org/>) You'll be looking for the download section, and a file called 32full203.exe (5.02MB). (This is the 2.03 version available at the time of this writing.) There is also a 16 bit version that will work on computers with less horsepower, but I will be focusing only on the 32 bit version that most hams will want to load into their Windows 98/XP equipped computers.

While you are downloading the software, skip over to <http://home.planet.nl/~chrisvangorp/> -- Here you will be downloading a file called the PA7RHMSvr map server.

(pa7rhmsvr107.exe – It's only 355KB) This will supply an unlimited supply of maps to your APRS station.

## **The Registration:**

UI-VIEW used to be a shareware program, and well worth every penny. Roger Barker, G4IDE (the author) became a silent key on September 8, 2004. Roger was the author of WinPack, UI-View and UI-View32, as well as other programs.

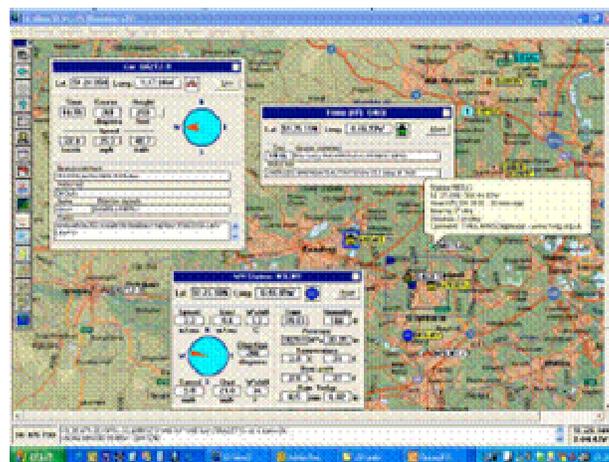
Just before Roger G4IDE passed away, the registration fees for UI-View and WinPack were waived, but it is asked that you make a donation to your local or national cancer agency.

For registration of UI-View32, you must now visit the website of MOCYP.

<http://www.apritch.myby.co.uk/uiv32.htm> Enter your callsign and name and then click on the registrar that lives the closest to you. Andy also has some great "addons" for UI-View & UI-View32.

After you register the software, you will get 2 numbers – One to activate the software, and one to get into the various APRS servers. Please write them down and keep the handy for the install process.

The last bit of information you'll need now is your location of your station in Longitude / Latitude. QRZ.com will give you a rough estimate of the location of your FCC mailing address.



**UI-View – A Great APRS program for FREE!**

It was playing with APRS that I first learned that longitude and latitude are not all created equal. The location in QRZ.com is a decimal number, whereas UIVIEW favors the more traditional degrees, minutes and decimal minutes. Since 60 seconds=1 minute and 60 minutes=1 degree, this can easily be done on a calculator, but there is a great little calculator online you can use that will make light work of the calculations. This is pro-

# APRS-How To Get Your Feet Wet (continued)

vided by the Bureau of Economic Geology website:  
[http://www.beg.utexas.edu/GIS/tools/dd\\_dms.htm](http://www.beg.utexas.edu/GIS/tools/dd_dms.htm)  
Here's an example:

QRZ says my station coordinates are: 41.1592 and -81.233115. In North America that would be North and West respectively. The program on the BEG website says it calculates out to: 41 Degrees, 09 minutes and 33.1 seconds and -081 Degrees N Latitude, 13 Minutes and 59.21 seconds W Longitude.

UI-VIEW is going to ask for your station latitude in the format dd.mm.nn<NS>. "dd" is two digits for degrees. "mm" is two digits for minutes. "nn" is two digits for decimal minutes. NOTE - decimal minutes, not seconds. (That means that whatever figure you have for seconds has to be divided by 60) Followed by <NS> -- which is either "N" for North or "S" for South.

My latitude would then become: 41.09.55N

Same formula applies to Longitude - The format is dddd.mm.nn<EW>. "ddd" is three digits for degrees. "mm" is two digits for minutes. "nn" is two digits for decimal minutes. NOTE - decimal minutes, not seconds. (Divide your answer by 60) followed by <EW> which is either "E" for East or "W" for West.

My longitude would then become: -081.13.98W

Note: This is going to get you in your neighborhood. The BEST way to calculate your location is by using a GPS receiver. That will make you accurate to within a few feet. Either way - This will get you close enough to get started.

## **Putting it all together:**

Lets put it all together now.

1. Install the UI-VIEW32 program and run it. Provided you didn't get any error messages during installation, proceed to step 2.

2. Open "Setup", "Station Setup". There's a place for your CALLSIGN, LATTITUDE and LONGITUDE. Your GRID SQUARE information will be calculated. Leave the PORT, UNPROTO ADDRESS and COMMENT alone for now. Make sure the UI-VIEW Tag is checked. Look for the SYMBOL dropdown and choose a picture that represents who or what you are. Most folks choose HOME or HOME(HF). Once you've done that, you should have a working program!

Of course, the maps that come with UI-VIEW are from the UK, so your going to need some local maps. As long as we are going to connect to the Internet for our information, we are going to now install our map server we downloaded earlier.

Run the pa7rhmsvr107.exe program and follow the instructions on the screen. After the program is installed, go back to the UI-VIEW program and open

"MAP", "Load a MAP." Select the map called "\_PA&RHMSvr." That's all there is to it. You can now navigate around the entire world by using the arrows that will appear when you put your mouse near the edge of the map (Double Click on the arrow.) or by using the Page UP and Page DOWN keys to zoom in or out. You can view any map from the entire world, continent, state, down to street level maps.

If you navigate to a view near your station you will see your STATION ICON on the map. If you place your mouse cursor over your station, you will see all of your station information in a pop up.

The last thing your going to want to do in your installation is establish 2 way communication between UI-VIEW and the APRS world. He we are going to establish the connection by using the Internet itself. You could also use a 2m radio, but for now were going to concentrate on using an international APRS Internet server. These are stations that take station data from "on the air" sources and compile and send the information over the internet. Our station will also take our station data and send it's location to the server so your station will appear on everybody else's map too.

1. From the UI-VIEW program open "FILE", "Download APRS Server List." The information that is in the box is old and inaccurate. Replace the address in the box with: [france.aprs2.net/APRServe2.txt](http://france.aprs2.net/APRServe2.txt)

Make sure you're connected to the Internet and select DOWNLOAD. The program will now fetch a list of current servers available to you.

2. Pull down Setup and select APRS Server Setup. There should be a bunch of APRS servers present. Select one that's close to you. (Anywhere in the US is fine.)

3. Place your server validation number in the box provided from the info you obtained when registering your copy of UI-View.

4. In the extra log-on text box type in r/41/081/150 - This limits the server to sending you APRS info in a radius of 150 miles from Northeast Ohio. The first numbers are you LONG and LAT with the third number being the radius from that point. If you don't do this, the server will try to send you ALL traffic from around the globe.

Finally. Close the window and select Action, Connect to APRS server. If all went well you should see server activity on your status area, and stations should start appearing on your Display. You should also see YOUR station on your map as well.

## APRS-How To (continued)

### Going Further

Your going to want to read the help text to learn about all of the APRS and UI-View features available. There is also a YAHOO discussion group called "UIView" that has TONS of information, as well as any question you can think of. It's a great source of information.

This is enough to get your feet wet and explore, and get you started in another fascinating facet of the Amateur Radio hobby! As always, I am available to help. Enjoy!

## Officers Needed for 2008

It's time to think about who will lead the club in 2008. During October, the current officers will be attempting to assemble a slate of folks willing to run for office. But they need your help. Anyone who would like to volunteer for an office or help with the nominating process should contact one of the club officers.

Of particular need this year is a nominee for the newsletter editor position. Telvin, KB6BYU, who has done so well the last several years, has decided not to run again. If we are to continue to have *The Microvolt*, we need someone to put it together. We would very much like to hear from anyone who can help or has a suggestion.

## JOTA Oct. 19-20,2008



Jamboree-on-the-Air, or JOTA, is an annual scouting and amateur radio event sponsored by the World Scout Bureau of the World Organization of the Scout Movement. Thousands of amateur radio stations around the world participate. If the conditions are right, it is common to contact a hundred scouting countries during the weekend!

These URLs explain it further.  
<http://www.arrl.org/FandES/ead/jota.html>  
<http://home.tiscali.nl/worldscout/Jota/jota.htm>

## John Luker, WB7QBC, SK



Bryant "John" Luker, "WB7QBC, 73's & 88's" CLEARFIELD - Bryant "John" Luker, WB7QBC, born March 11, 1944, passed away September 11, 2007 in his Clearfield home after an extensive and courageous battle with a number of terminal illnesses.

While he spent the last 22 years fighting to survive, he never got discouraged or lost his dignity. He cherished and appreciated every additional day he was blessed with. John is survived by his wife of 35 years, Gaye, WB7QEB, his five children, David and Sharon Young, Lynda and Scott Ward, Jeff and Angelic Luker, Jeri Maden, KA7SKN, and Brenda, KB7BIC and Mike Cordon. He has 19 grandchildren (including KE7ELE and KE7GJT) and four great-grandchildren. He is also survived by his mother, Venus Cederstrom, KB7FXB; his father, David Luker; step-father, Rudy Romano; and brothers, Gary, Rudy and Chuck Romano. He is preceded in death by his brother, Thomas Romano who through bone marrow donation, gave him the gift of life 22 years ago. John had many interests including his career as a machinist and his ability to fix and repair equipment. Aside from John's family, his greatest love was his hobby as an Amateur (Ham) Radio Operator. He was a member of the Sweetwater Amateur Radio Club in Green River, WY, where he had resided since 1975. He returned to his home state of Utah in 1985 where he continued to dedicate his time to enhancing Radio Communication and Emergency Preparedness. A major accomplishment in his life was establishing and implementing the original CSERG Group, volunteering his time and knowledge to Clearfield's Emergency Operation Center. He was known for his willingness to help and elmer his family, friends and fellow Amateur Radio Operators. John's family would like to thank friends, family and fellow Amateur Radio Operators for their endless prayers and support throughout the years.

## October Meeting: Homebrew

**Thursday, October 4th, 7:30 PM, Room #1230**

October 4 is Homebrew Night! This is the annual event where people who have built some of their own amateur radio equipment can show it off and explain what they've done. If you have built something recently, or can finish a project by October 4, be sure to bring it in.

Good homebrew projects include keyers, amplifiers, preamps, power supplies, converters, and transverters. Items shown should be ones that have not been shown at a previous UARC homebrew night.

If your 160-meter beer-can beam is too large to bring in, just bring pictures and documentation to show everyone what you have done.

If you aren't going to build something, be sure to come anyway and see what people have done. This year Ron Jones, K7RJ, will be the master of ceremonies for the event. Many remember a homebrew night

a number of years ago where Ron offered a number of great homebrew tips.

Of course, the meeting will include the "standard" meeting features:

- Availability of ARRL books from Fred, the "book lady".
- An opportunity to join UARC or renew your membership.
- An opportunity to join ARRL or renew your membership.
- The chance to meet face-to-face the people you talk to on the air.
- The "Meeting(s) after the meeting":

A chance to enjoy pizza or other gastronomic delights with other hams. One group goes to Litza's Pizza, 716 E. 400 South. Another group goes to a restaurant that varies from month to month, but will be announced at the meeting.

## Exam Schedule

10/03/07 (Wed.) Ogden  
Contact: Mary Hazard, W7UE  
Phone: (801) 430-0306

10/06/07<sup>1</sup> (Sat.) Salt Lake City  
Contact: Gordon Smith, K7HFV  
Phone: (801) 582-2438

10/13/07 (Sat.) Logan  
Contact: Roberta Lofthouse, KJ7LQ  
Phone: (435) 245-6632

10/17/07 (Wed.) Provo  
Contact: Steve Whitehead, NV7V  
Phone: (801) 465-3983

10/17/07 (Wed.) St. George  
Contact: Ron C. Sappington, WI7Z  
Phone: (435) 673-4552

10/30/07<sup>1</sup> (Tues.) Salt Lake City  
Contact: Eugene McWherter, N7OVT  
Phone: (801) 541-1871

11/07/07 (Wed.) Farmington  
Contact: Mike Youngs, KK7VZ  
Phone: (801) 573-3922

11/14/07 (Wed.) Provo  
Contact: Steve Whitehead, NV7V  
Phone: (801) 465-3983  
(Provo session on 2nd Wed. Nov. Only)

11/15/07 (Wed.) St. George  
Contact: Ron C. Sappington, WI7Z  
Phone: (435) 673-4552

11/15/07<sup>1</sup> (Thu.) Roosevelt  
Contact: R. Chandler Fisher, W7BYU  
Phone: (435) 722-5440

11/21/07 (Wed.) St. George  
Contact: Ron C. Sappington, WI7Z  
Phone: (435) 673-4552

11/27/07<sup>1</sup> (Tues.) Salt Lake City  
Contact: Eugene McWherter, N7OVT  
Phone: (801) 541-1871

12/01/07<sup>1</sup> (Sat.) Salt Lake City  
Contact: Gordon Smith, K7HFV  
Phone: (801) 582-2438

12/08/07 (Sat.) Logan  
Contact: Roberta Lofthouse, KJ7LQ  
Phone: (435) 245-6632

12/19/07 (Wed.) Provo  
Contact: Steve Whitehead, NV7V  
Phone: (801) 465-3983

<sup>1</sup> Pre-registration required. Contact the contact person prior to the examination date.

For more detail either call the contact or checkout the information on our web-page:

<http://www.xmission.com/~uarc>