

Propagation

Kootenai Amateur Radio Society (KARS) Newsletter

MARCH 2005

PRESIDENT'S CORNER

THE MIRACLE IS IN THE MEMBERSHIP

Thank you for the opportunity to serve you as president for the next year. Spring is definitely in the air and it's very welcome here.

The 2003-2004 Leadership Team, under the direction of Randy and Jack, have done a fantastic job last couple of years and I am sure all of us have had an opportunity to grow under their direction to have fun and grow in our hobby. We need to take the time to say THANK YOU, both collectively and individually with our next opportunity. So for me THANK YOU Randy, Jack, Darrell, Chris, Linda, Jim, and Steve. Your time and work over the years have been a sacrifice that has benefited all of us and you do deserve our accolades.

As many of you know I worked for NCR, and as one of my certifications was in Project Management. If you don't know where you are going, you won't know when you get there! It is also true that you won't know what to do next on the road. I would like to set FOUR primary goals for the club for 2005. GROWTH, KNOWLEDGE, MEMBER PARTICIPATION, FUN.

GOAL 1: GROWTH. As with most organizations, if you are not growing, you are dying, and a Ham Club is the same. I want to see a sustained 10% growth in this club every year. It is up to me to help create the environment for that growth. It's up to all of us to make it happen. We need to start thinking out of the box in everything we do! We need to start thinking about



ways to recruit, as well as who to recruit. Are there other organizations that can benefit from having their members participate in KARS. Let's take a step, in our thinking, outside the box. How about Boy and Girl Scouts? How about CAP? How about Communications companies? How do we reach them and more?

GOAL 2: KNOWLEDGE: Your response to the survey was fantastic and more are still coming in. You have given Jack the information he needed to set the agenda for the year and you will be hearing from him soon. I would like to have the meeting plans for the year publish on the web site and focused in the excellent news letter Steve publishes. We have a wealth of experience in this club let's share it with others.

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- Bio of new KARS prez.
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BITS & PIECES de K7JMC

THIS YEAR!! I see good things ahead for KARS. Bob & I are taking an action item to continue to grow the Club. As I said last year, there are in excess of 460 Hams in and around this area. We have to show them what KARS is about and how they can benefit from membership.

In addition to growing KARS, we are going to continue to build the relationship with the Bonner County Club for the benefit of all of us in the "Panhandle."

Finally, I am looking forward to working with Bob & Warren to layout some very interesting presentations for the up coming meetings. Keep you ears peeled for the latest info.

Let's all work together to make 2005 a banner year for KARS.

Regards,

Jack/K7JMC

ARRL VEC license testing

If you want to find a test locaton, contact the editor (see page 6).

Propagation is published monthly by the KOOTENAI Amateur Radio Society (KARS). The club is located in Coeur d' Alene, Idaho and serves the North Northern Idaho and the Spokane, Washington areas

KARS operates voice repeaters on 146.980 and 444.775 MHz and a packet repeater on 145.510 MHz. KARS normally holds meeting at 1900 hrs, on the second Monday of each month in the Shep Rock Building at the Coeur d' Alene Airport.

Anyone interested in Amateur Radio is welcome to join. Dues are \$12.00 (individual) and \$18.00 for a family membership. Contact the Treasurer (see page 6) to join KARS.

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CALENDAR OF EVENTS

DATE/TIME	EVENT	LOCATION
14 March at 7 p.m.	KARS monthly meeting	Kootenai Co. Airport-- Shep-rock Building
21 March at 7 p.m.	ARES/RACES meeting	Kootenai Co. Sheriff's Department Basement
Every Wednesday at 8 a.m.	Donut Day	Rathdrum Super 1 store (on Highway 53)
Second Saturday each Month, 9 a.m. to 11 a.m.	NW Traffic Net Coffee Klatch	Steve's Dugout In Post Falls, ID

Next KARS Meeting:

**Monday, 14 March 2005 at
7:00 p.m. in the Shep-rock Building
at Kootenai County Airport.**

Directions to the KARS meeting:

**North on U.S. 95 to Miles Ave. (Miles is about
one mile North of Hayden Avenue). West on
Miles to the airport gate (access code 1088).
Bear left to the Shep-rock Building (about 200
yards from the gate).**

PACKET RADIO: A PRODUCT OF THE COMPUTER AGE

by Larry Telles, K6SPP

PART TWO: AX.25 – The Amateur Radio-Packet Link Layer Protocol.

HISTORY

Early 1982 the Amateur Radio Research and Development Corporation (AMRAD) and the Radio Amateur Telecommunications Society (RATS) worked on a packet-radio protocol. They recommended adapting CCITT Recommendation X.25 for amateur packet radio. In June 1982, AMRAD and RATS worked out a new protocol, *amateur X.25* or, AX.25. It was modified in October of the same year to add an optional third address for a digipeater (a device that receives, temporarily stores and then retransmits or repeats packet-radio transmissions that are specifically addressed for routing through the digipeater). The ARRL approved AX.25 in October 1984.

AX.25 BASIC TERMINOLOGY

The *Balanced Link Access Procedure* (LAPB) of the CCITT X.25 was used as the model for AX.25. AX.25 works with either Half or full-duplex. Half duplex operation is similar to a regular telephone conversation. One end listens while the other talks, then the roles reverse. Another way is that both ends can transmit, but one at a time. Full duplex means the both ends transmit and receive at the same time. One big advantage of AX.25 is that every packet sent contains the senders and recipient's call sign, thus providing station identification with every transmission.

AX.25 FRAMES

1. AX.25 transmissions consist of small blocks of information called *frames*.
2. There are 3 basic types of frames: *Information (I)*, *Supervisory (S)*, *Unnumbered (U)*.
3. An I frame contains user data that is being transmitted from one station to another.
4. An S frame provides control of the communications link. The S frame acknowledges the receipt of I frames or can request retransmission of I frames.
5. U frames provide additional control of the communications link. There is also a UI frame.

AX.25 FIELDS

1. A frame is subdivided into smaller blocks of information called *fields*.
2. Each field is an integral length measured in *octets*. (An octet is a byte or eight bits).
3. Each frame contains the following fields: flag, address, control, frame-check, & final flag.
4. The I and UI frames also contain a protocol identifier and information field.

FIELD:	FLAG	ADDRESS	CONTROL	PID	INFORMATION	FCS	FLAG	
LENGTH:	8 BITS	112-560 BITS	8 BITS	8 BITS	N X 8 BITS	16 BITS	8 BITS	
CONTENTS:	01111110	CALL SIGNS & SIGNS OF DESTINATION, SOURCE, & DIGIPEATERS	FRAME TYPE	LAYER 3 PROTOCOL TYPE	USER DATA	CALCULATED VALUE	01111110	
	*						**	
	First bit sent						Last bit sent	

INFORMATION FRAME

(continued on page 4)

Do you know our new prez?

(see bio here)

The editor asked me to provide a short bio so here it goes. I was born May 9th, 1944 in Santa Monica (LA), California. I grew up in Big Bear Lake, Calif. about 8500 feet in the mountains. I was an Air Force brat and went to a lot of Military Schools. Graduated from Elsinore Naval and Military Academy. Passed my novice exam when I was 18, WN6OZJ. Then my General and Advanced license, WB6EDS. (I passed the Advanced and Fluked the General!! Had to retake it 30 days later!) I received an AA degree from Columbia Christian College in Portland, Oregon and started working for National Cash Register (NCR) there. I went to NCR computer school in Dayton, Ohio where I met Bonnie Purkepile at a roller skating rink. We both skated competition. Bonnie had a Gold Medal and I had reached Silver.

I was then transferred to San Francisco. We had a mail/telephone romance and were married a year later and lived in San Rafael for 8 years. I then received a promotion to move to Dayton where we lived for 25 years. I became a firefighter and paramedic for 13 years, a Scout Master, and was a member of DARA (Dayton Amateur Radio Association) working on the Hamvention Talk-in team and member of the DARA Emergency Van/Mobile Command Center team.

Moved to my parents home in Coeur d'Alene in 2001. I had to take the Extra Exam 3 times (passed all 3 times) to get the license. In 1990, I passed the written but flunked the code. In 2002, at the Dayton Hamvention, I passed the test again, but when I got home, I had a letter explaining they gave the last years Extra Exam by mistake. I retook the exam a third time at the KAR's Hamfest and FINALLY got the license!

Currently I am working under contract with the Kootenai County Office of Emergency Management. I am a member of the United States Coast Guard Auxiliary where, among other duties, I am the ADSO (Assistant District Staff Officer), District 13 East, Group Seattle, for Communications. The area of responsibility covers Eastern Washington, Eastern Oregon, Idaho, and Montana. In addition, Bonnie and I enjoy doing safety patrols on Lake Coeur d'Alene and teaching Boating Safety at NIC and in the four state area. I have been invited to teach a 2 hour session on Winlink 2000 at the Communications Academy on Saturday, April 2, representing the US Coast Guard Auxiliary.

Other areas of volunteering:

- President of KARS
- Kootenai County Office of Emergency Management, Public Education Officer
- Kootenai County 911 System Advisory Board Member
- AEC for training for the ARES/RACES
- MCC (Mobile Command Center) Bid Development Team
- LEPC (Local Emergency Planning Council) member
- Disaster Planning for Families committee member
- Office of Emergency Management Council member
- Safety Patrols on Lake Coeur d'Alene

So I guess I am looking for something to do in my spare time!

Bob Kesson

KARS HAMFEST COMING

Watch the newsletter and the K7ID.com website for information on the upcoming KARS Hamfest to be held on 11 June 2005 at the Lion's Club in Rathdrum. Grand-prize in drawing is a Yeasu 857D HF transceiver! You may be the winner!

PRESIDENTS CORNER (cont.)

(continued next column)

GOAL 3: MEMBER PARTICIPATION:

"Give a little, get a lot!" This year, I would like to see each member participate in something. Think teams! If you are going to teach a topic, involve another member to work as a team. You may not be able to teach, but you may be able to provide input for the news letter. Remember, it's your Newsletter. What about outside events? You gave us a list of the ones you would like to have but there will always be room for more. I will be working with Warren Conklin to plan the dates for the year. I would like to see a member of the club to volunteer to lead one of the events. There is a lot of room to share the fun.

GOAL 4: FUN:

This has to be one of the corner stones we need to continue to work on. I don't know about you, but I had a lot of fun last year and I don't want it to stop. Laughing is a tonic that creates good health. Let's find ways to put fun in everything we do. As a goal, everyone will be required to find something to laugh about at each meeting or event. This one is so important that I think we should have a member responsible to see that this occurs at every club event. Volunteers?

We have a lot to offer the community, lets not keep it a secret.

LEAKS ARE AUTHORIZED!

LET THE WORD GO FORTH!

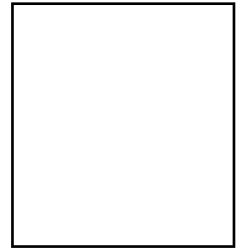
KARS IS STILL ON THE MOVE!

Remember: THE MIRACLE IS IN THE MEMBERSHIP

See you at the next meeting.

Bob Kesson

KOOTENAI AMATEUR RADIO SOCIETY
PO BOX 5222
Coeur d' Alene, ID 83816



Deliver to:



This is the March 2005 Issue.

Current KARS officers

President:	Bob Kesson 772-6745	K7CGA
1st Vice President:	Jack McElroy 687-3293	K7JMC
2nd Vice President:	Warren Conklin 772-6484	WB7ECU
Secretary:	Linda Chamberlain 765-3144	N7UTK
Treasurer:	Chris Monroe 687-2251	N7ZUJ
Newsletter Editor:	Steve McQuiston 772-4095	WO6LF
Repeater Tech:	Jim Monroe 687-2251	N7ESU

EMCOMM TRAINING OPPORTUNITY

FINAL YEAR OF GRANT--Amateur Radio Emergency Communications Course registration: Registration for the ARRL Amateur Radio Emergency Communications Level I on-line course (EC-001) opens Monday, March 07, 2005, at 1201 AM EST and will remain open until all available seats have been filled or through the March 12-13 weekend--whichever comes first. Class begins Friday, March 25. Radio amateurs 55 and up are strongly encouraged to participate. Thanks to our grant sponsors--the Corporation for National and Community Service and the United Technologies Corporation--the \$45 registration fee paid upon enrollment will be reimbursed after successful completion of the course. During this registration period, seats are being offered to ARRL members on a first-come, first-served basis. To learn more, visit the ARRL Certification and Continuing Education Web page <http://www.arrl.org/cce>. For more information, contact Emergency Communications Course Manager Dan Miller, K3UFG, 860-594-0340 or send your query to cce@arrl.org.

--RECOMMENDED BY THE EDITOR--