

Virtual reality

Seeing what's not yet there

Imagine a world in which doctors practice delicate, life-saving surgery without ever piercing the skin. Imagine experiencing life on other planets, without ever leaving the ground.

This world already exists in an emerging software technology called "virtual reality," allowing human beings to jump through the computer screen and enter a three-dimensional universe that looks and sounds "real" but isn't.

Virtual reality—or VR—is considered the next frontier in the growing galaxy of computer technology. Scientists, educators, researchers and dreamers say it could change our lives as much as the telephone or television set. Its applications extend to space exploration, medicine, communications, architecture, military training, education and, of course, culture and entertainment.

Some have called it electronic LSD, but its pioneers say it's too diverse, too advanced and too interactive to be compared to a mind-altering drug. Besides, it's legal.

"VR doesn't threaten the body mentally or physically," said A. J. Redmer, executive director for the Virtuality Group for Spectrum Holobyte and Cyberstudio, makers of VR software.

VR systems have been in development for more than a decade and are used routinely by the Pentagon and the National Aeronautics and Space Administration, where mere mortals can soar to the surface of Mars at will. Pilots who flew sorties over Baghdad in the Persian Gulf War trained in vir-

tual reality simulators and surgeons have used VR to conduct realistic practice operations. In Japan, customers can design computer models of ideal kitchens, step into them and then "move" cabinets or refrigerators around to their liking.

Researchers say VR will allow future doctors to explore the inside of the human body and give "virtual" adventurers the experience of visiting prehistoric Earth, exploring Venus or sitting in the dugout of a Cubs or Cardinals game. It may also give amazing new options to the handicapped. In 30 years, pioneers say, a VR system will be plugged into every home.

At the moment, however, the technology is expensive (up to several hundred thousand dollars) and, some say, still rudimentary.

"VR is about where television was in the 1940s," said Jas Morgan, music and arts editor of Mondo 2000, a Berkeley, Calif., magazine specializing in the effects of high technology.



VR uses a "head-mounted display," which is a pair of goggles that presents your eyes with a computer-generated, three-dimensional image. We're not talking plastic 3-D glasses. These are sophisticated (but bulky) viewers in which you can shape the figures in the artificial world. You can "fly" to the other side of the room by simply pointing your finger. On your hand is a special glove that allows you to grasp objects in this virtual environment and move them.

The environment you see looks surrealistically perfect, like a cartoon, and the images can get out of focus. The quality of the headsets and the programming can vary. It depends on what the system is designed to do. But leaders in the field say that virtual reality will get better and cost less in a few years.

Virtual reality has long been near and dear to science fiction writers and producers. A virtual reality center called the Holodeck is a mainstay on the popular TV show "Star Trek: the Next Generation." VR themes are also prominent in such movies as "Total Recall" and "The Lawnmower Man."

In fact, experts say VR's entertainment value will create widespread demand for it. It may also generate the money needed to expand the technology.

An arcade version of virtual reality is being marketed by Spectrum Holobyte of Alameda, Calif., in conjunction with two other companies. Virtuality, an interactive computer entertainment system, costs about \$3.50 for a four-minute game.

(Continued on page 12d)



SHELBY ELECTRIC COOPERATIVE

217-774-3986

SHELBYVILLE, ILLINOIS

Shelby Electric News

Robert Westenhaver retires



Shirley Westenhaver looks on as Neil Pistorius presents Bob with a watch.

On January 4, the employees of Shelby Electric gathered for a luncheon honoring retiring employee Robert E. Westenhaver. Joining Bob for the occasion were his wife, Shirley, daughters Christy Banning, Kendra White, and Amy Duckett, and son Bob Westenhaver, Jr.

Westenhaver was employed by the Cooperative on January 16, 1973, as Director of Member Services. During that time he has been responsible for the electric heat program, energy grants, staking, and various other member services activities. Everyone at Shelby Electric wishes Bob the very best of retirements.

Rural insurance? No!

Recently it has been brought to our attention that cooperative members have once again received information about medical insurance. The questionnaires and policies currently being distributed have been underwritten by the Reserve National Insurance Company and Mutual of Omaha and may suggest that rural electric cooperatives endorse the product.

We would like to inform everyone that Shelby Electric Cooperative is not affiliated with these organizations and has not made any such insurance available to its members through these or any other companies.

Shelby Electric Cooperative 1993 holiday closings

January 1	New Year's Day
April 9	Good Friday
May 31	Memorial Day
July 5	Independence Day
September 6	Labor Day
November 25	Thanksgiving Day
November 26	Thanksgiving Holiday
December 23	Christmas Holiday
December 24	Christmas Holiday
December 31	New Year's Holiday

Youth to Washington Tour contest

Once again Shelby Electric will be sponsoring two students for a trip to Washington, D.C. The tour this year will be June 18-25. Suzanne Tate will be contacting the schools in the Shelby Electric area and will have

information about the contest. If you're a sophomore or junior, please contact your English instructor or call Suzanne Tate at 1-800-677-2612.

Coping with winter outages

Winter outages can be miserable. It's almost always dark, always cold, always dismal. Try as we might, they'll always be with us.

But a winter outage doesn't have to be disastrous, and you can be relatively cozy if you do some planning and take a few precautions.

When the power goes off, the first thing to do is disconnect those electric circuits that serve delicate electronic appliances and entertainment equipment. This will protect them from any surges that may occur when power is restored. When it is restored, wait for 15 to 30 minutes to ensure that the outage is over, then reconnect those circuits.

And, if the lights go dim and stay that way, disconnect those circuits that serve motor operated appliances. Dim lights mean that the voltage coming into the home is not high enough to adequately serve motors — a low voltage situation. Operating motors at low voltage may damage them.

Here are a few tips to help you weather a siege of bad weather:

For warmth

1. Several layers of lightweight clothing will keep a body warmer than one heavy piece.
2. A backup heater can be used in good stead, but carefully. If the heater has a flame, ventilation must be provided.
3. During an extended outage, use one room (preferably one on the sunny side of the house with few windows) in the house to conserve as much heat as possible. Open curtains during the day and close them at night.

For light

1. Know where the flashlight and fresh batteries are.
2. For safety, place lighted candles in containers such as coffee cans.
3. Have extra lantern fuel on hand if lanterns are used for light. Refill the lanterns outdoors.

For food

1. Stock supplies of food such as canned meat, tuna, powdered milk and juices, cereal, peanut butter and crackers.
2. Fill plastic jugs with water.
3. Have throwaway plates, plastic silverware and a manual can opener on hand.

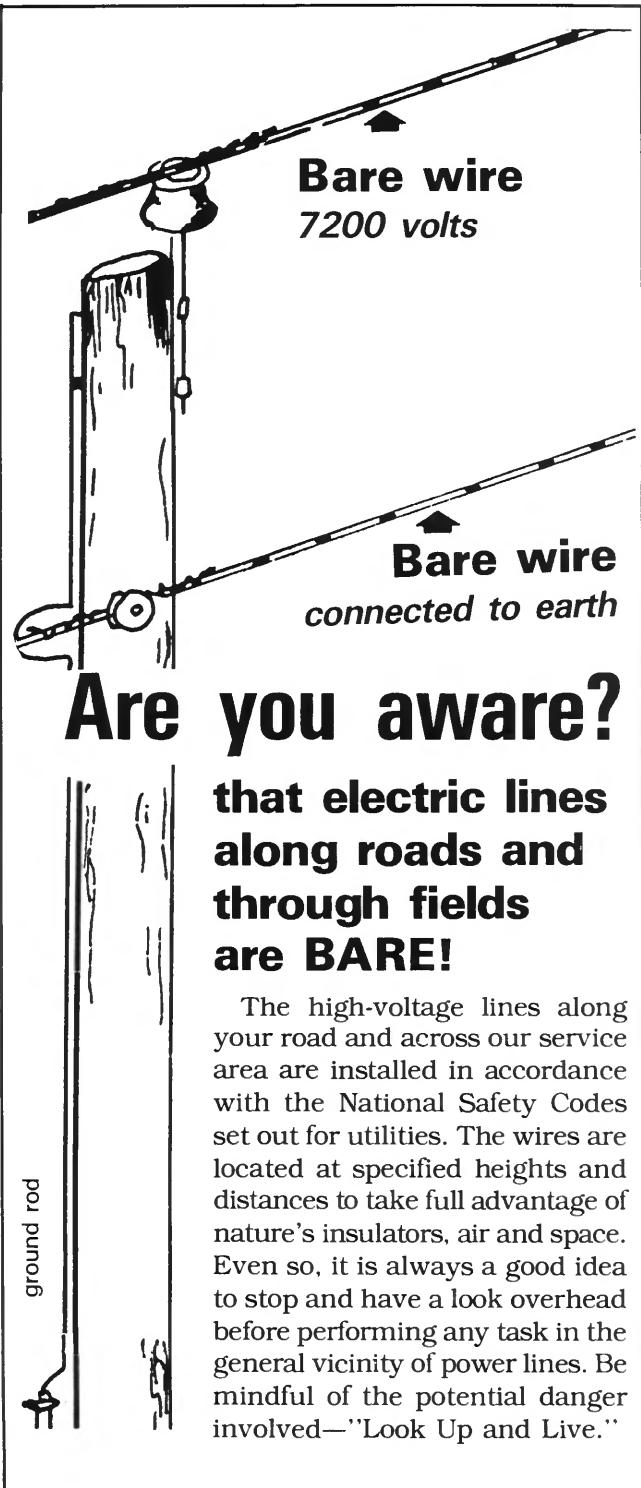
During an extended outage

Shut off the water supply (and the electricity to the pump, if you have one) and drain the system. Pour antifreeze into the plumbing fixtures in the bathroom and the kitchen.

Have the following general items on hand

1. Wind-up alarm clock
2. Battery powered radio
3. Extra blankets

Prepare as if every winter outage will be a long one and you'll not be caught short of creature comforts. You can be confident and rest assured that Shelby Electric Cooperative will work around the clock to restore service to all customers as quickly as possible.



Are you aware?

that electric lines along roads and through fields are BARE!

The high-voltage lines along your road and across our service area are installed in accordance with the National Safety Codes set out for utilities. The wires are located at specified heights and distances to take full advantage of nature's insulators, air and space. Even so, it is always a good idea to stop and have a look overhead before performing any task in the general vicinity of power lines. Be mindful of the potential danger involved—"Look Up and Live."

Virtual reality

(Continued from page 12a)

To play, you step into a round metal booth and strap on a backpack while an attendant fits a helmet over the top half of your face. Staring at the wraparound liquid crystal screen inside the helmet, you see a large platform floating in space. Players say it feels like they're standing on the platform.

Rotate your head to see four other platforms connected by staircases. You're handed a "controller" that looks like a

joystick but is more sophisticated. A gun barrel materializes on the screen and then you look for a gun-toting villain to shoot. Unlike video games or TV, VR takes physical movement and users of the new arcade game say it can be exhausting.

"In VR, you have to mentally focus the same way as in real life," said Redmer. "It's not comparable to looking at a flat computer or television screen. There is no way of representing the experience of VR without actually doing it. It's like you're there and you interact with the

environment you're in."

VR advocates agree it is limited only by human imagination. Others question whether the new technology will help people interact with the world or avoid "actual" reality altogether.

"It's very important that people not fear these technologies as they come along and also not embrace them blindly," said Morgan. "Interactivity is one of the saving graces of this technology. VR can be a great way to communicate human experience to one another.

—Rural Electric News Service

The answer: a garage, a bush, and a dog.

The question is, "What kind of things stand between your electric meter and accurate billing?"

Your electric cooperative's meter readers need easy access to your meter so that your billing will be correct. Sometimes, the reader will find that a garage has been added to a home and the meter is now locked indoors. Or, a small bush has grown into a big obstacle right in front of the meter.



home and the meter

Or, a small bush has

right in front of the meter.



Then there's the family dog who's left outside to protect the property.

It not only makes the meter reader's job difficult, but it can make it dangerous, too. Take a moment to check your meter. If you can't get to it, neither can we. If you have questions or need to make arrangements for our access, just call.

Seeing infrared

Hamlets in rural England use them to trace burglars. California firefighters use them to find smoldering hotspots. Persian Gulf war pilots located targets with them. And, astronomers hope someday to use them to look "inside" faraway stars.

The device so in demand in so many arenas these days is the infrared video camera, a new generation of infrared technology that can help people see the world around them quite differently than before.

The theory behind how the camera works is based on this fact: A warm object emits more radiation than a cool one.

The camera can produce a picture based on this difference in radiation, allowing us to view images lost to the human eye.

For example, because the eye responds to visible light, it can miss the glowing embers beneath the ash at a fire site. It also can't tell whether an insulated cup holds hot or cold liquid. And, it can't see in the dark. An infrared video camera can help it do all three.

Scientists predict a host of uses for the emerging technology, including aiding in commercial aircraft landings at night and in foul weather, and night surveillance.

For years, older infrared technologies have been used in the electrical, construction and petrochemical industries. They have been used to help detect leaks and stress patterns, control oil pollution and conduct land surveys and medical analyses. But the new platinum-silicide cameras are said to offer a low-cost, video-quality alternative.

Scientists have used them to pierce the interstellar dust and look into distant regions of the universe, and NASA has long lobbied for an infrared space telescope, which leading astronomers term "of fundamental importance for almost all aspects of astronomy."

Such a telescope could provide a view "almost a thousand times more sensitive than Earth-based telescopes," according to astronomers, who have dubbed this the "decade of the infrared." The telescope's advanced detectors would reportedly enable it to measure the infrared signals from distant planetary bodies to get clues to their nature.

In a more down-to-earth use of the infrared video camera, the hamlets of Halmore, Purton and Hinton in Gloucestershire in rural England have installed the cameras on telegraph poles outside of town. The cameras record the comings and goings of all who enter and exit the villages in an effort to stop the growing number of break-ins by

traveling urban thieves.

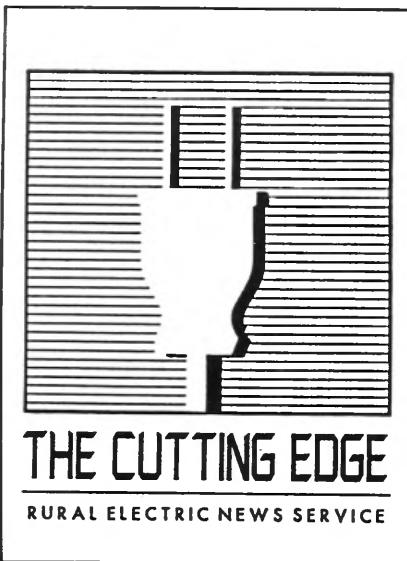
The police who view the tapes likely see an array of ghostly images, because infrared video gives a still-recognizable but different view of a person's body than regular video.

Faces still look like faces, but familiar characteristics such as eye and hair color are absent from an infrared image, whereas other features, such as the warmer eye sockets, are pronounced. The nose and ears are usually cooler than the rest of the face and are darker on the image, while the mouth will appear darker or lighter, depending on whether a breath is being taken or let out.

An infrared or thermal image is essentially a portrait of any given scene's temperature. It is the inner light that is measured, not the outer. One drawback, researchers say, is that many objects radiate with similar intensity and therefore there is little contrast in infrared images. Highlighting the contrast is a major goal in infrared camera technology.

English astronomer Sir William Herschel demonstrated the basic difference between light and heat in the early 19th century, using a prism to split sunlight into its spectral bands, according to *Scientific American*. As he moved a thermometer through the bands, he found that the temperature rose from the blue end of the spectrum to the red. The temperature continued to rise beyond the red, where there was no visible light. The invisible light beyond the red became known as the infrared.

—Rural Electric News Service





Shelby Electric News

SHELBY ELECTRIC COOPERATIVE

217-774-3986

SHELBYVILLE, ILLINOIS

Dear Member:

Based on exhaustive studies done by both our consulting engineering firm and Shelby Electric Cooperative's Board of Directors, a rate increase of 7.6% was implemented with the January 26 billing. All studies showed that a 9.6% increase should be passed. By trimming as much as possible, we arrived at the 7.6% figure.

As you are aware, a cooperative is a not for profit organization. We purchase power as does any utility. Our cost of power has risen dramatically since our last rate increase to you in 1991. Our power bill is currently 77% of our income.

Not only does this cooperative provide power, we must provide reliable service to you, the member. In order to do that, new lines must be built; and existing lines must be replaced with new conductor, poles, etc. We are trying to maintain our on-going upgrade program. In 1992, we replaced 223,000 feet of wire and over 350 poles.

Many of our lines have been in place for fifty years. Without a replacement program, line outages will be more frequent and will be for longer periods of time.

As with any rate increase to you, your cooperative's Board of Directors and management have thoroughly explored every option before adopting this rate. We have determined that 7.6% is the minimum percentage possible. We do not anticipate another increase in the near future. Please check this publication for some new ways to save on your power bill. If you have any questions, our staff is always available to provide information and clarification whenever possible.

Very truly yours,

James E. Coleman
General Manager

JEC/suz

Attention all Shelby Electric members

There is no special rate that a consultant can get for you that you cannot get for yourself at the Shelby Electric Cooperative office.
Don't let someone else get your potential savings.



The above is a graphic breakdown of the Cooperative's revenue for 1992. As you can see, 77 cents of every dollar goes to pay the power bill from our supplier, 11.6 cents is taken by depreciation and taxes. The remaining 11.8 cents is what we have left to operate the entire Cooperative.

Ways to save on your power bill

New member programs will be available on March 1, 1993, to all members being billed on Rate Schedule A or Rate Schedule B.

Controlled air conditioning service

Available to any member with a central air conditioning system over 3 KVA. You must agree to allow the Cooperative to install a radio control device so the Cooperative can control the compressor during peak or energy conditions.

Credit: The member will receive a credit of \$20 per year if installed and available during July and August.

Controlled water heaters

The Cooperative will agree to provide the maintenance on a member's electric water heater — including replacement when necessary — for the right to interrupt service in conjunction with the load management program. The Cooperative will provide and install a new electric water heater to replace a gas water heater at no charge at any time.

Dual fuel rate

Available to any member using electric energy as the primary source of heating. The member must have an alternate source of fuel for heating available.

Member must agree to permit the Cooperative to install a radio-control switchover device, which will cause the system to utilize the alternate fuel source for heating when the switch is activated during peak or emergency conditions. A separate meter will be installed to meter the electric side of the heating system.

Rate: Facility charge: \$5.00 per month
All heating kwh: 4.5¢ per kwh

Geothermal heating

Available to any member utilizing a geothermal heating and cooling system as the main home conditioning source. Member must agree to allow the Cooperative to install radio control equipment on the air conditioner's compressor and the resistance backup coils on the heating unit. The Cooperative shall have the right to control the heating or cooling system during the winter or summer peaks or under emergency conditions. A separate meter will be installed by the Cooperative to measure the geothermal unit.

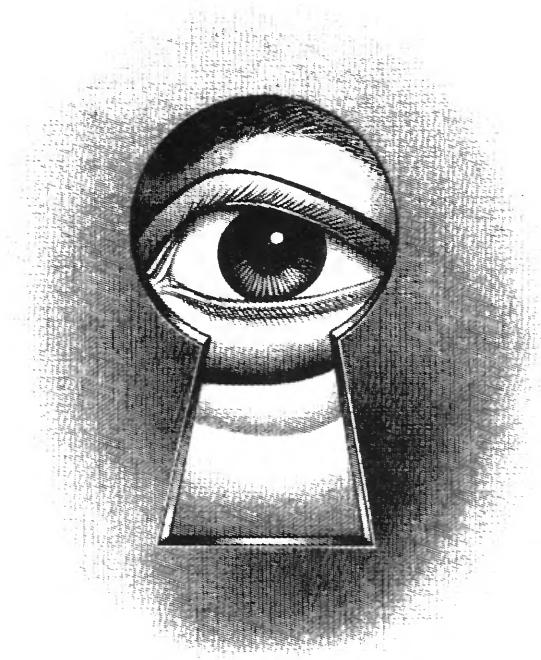
Rate: Facility charge: \$5.00 per month
All heating and cooling kwh: 5.7¢ per kwh

Levelized billing

Levelized billing shall be available to members under rate schedules A and B. When requested, the Cooperative will bill a fixed amount each month for qualifying members. The member must pay monthly for one year before qualifying. The member's first payment must be in the month of the March billing. Starting dates later than March will be permitted providing the member makes all payments due since the March starting date. The Cooperative shall determine the amount of payment. Member must read his meter monthly and send in the reading with the monthly levelized payment. If a monthly reading is not provided, the standard meter reading fees shall apply, and the meter will be read by Cooperative employees.

More information on these rates is available by calling or stopping in the Shelby Electric office. We will be happy to provide this information and copies of the rate schedules upon request.

On the outside looking in.



Some electric utility customers are bound to feel that way. The office is in a faraway city, unexplained policies are enforced, and your only contact with them is your monthly bill. It's not the "cooperative way" of doing business. An electric cooperative is something special. It's an organization providing a service to its owners. And the owners are you. That's why your participation is so vital to its continuing success. That's why your attendance at the Annual Meeting is so important. It's the leadership you elect from among your neighbors — the board of directors — that guides the operation of the cooperative and sets the kind of policy that puts people first. Local ownership, local control, not-for-profit operation...We think it's the best way to serve you, the cooperative way.



Electric Cooperatives of Illinois

Good for ALL Illinois

It's not a book yet.



Starting a project doesn't mean the job is done. Some people have said the rural electrification program isn't needed anymore because most of the country has electricity. They think the job was done when power lines were put up 50 years ago. They should consider this: The entire system of power plants and lines must be maintained constantly to make sure all members have reliable service. An ice storm is a reminder of that. Some 25 million Americans in 46 states rely on their electric cooperatives for a better quality of life. As long as they work, play and raise families there, the REA's job isn't done.

And the annual cost to U.S. taxpayers? Less than it costs to build 50 miles of interstate highway...and less than other electric utilities receive in federal subsidies. Electric cooperatives are about people doing things for themselves, and thanks to these people, the final chapters on rural America haven't yet been written.



Electric Cooperatives of Illinois

Good for ALL Illinois



SHELBY ELECTRIC COOPERATIVE

217-774-3986

SHELBYVILLE, ILLINOIS

Shelby Electric News

Load management savings coming soon

Your electric cooperative will soon have a load management program in effect that will enable you to "control," at least to an extent, your electricity usage, and will allow us to reduce costs dramatically.

Our costs are based on our peak demand, and a voluntary load management program will allow us to monitor the power flowing through the substations to your homes and businesses.

Our radio system, which enables us to monitor that flow, will also allow us to control some heavy electricity users, such as water heaters and air conditioners. That will enable us to save thousands of dollars over the course of a year. Since you as members of the co-op are also the owners, the savings will be passed on to you in the form of reasonable rates and deferred rate increases.

The items to be controlled would be shut off for very short periods of time, and only during the hottest and coldest times of the year, when most electricity is used.

As we've mentioned earlier, peak periods occur when everybody is using power at the same time. Many co-op members wake up at about the same time every day, shower, cook breakfast and begin their daily routine. In the evening, members come home, use electric appliances, hot water and lights. And they turn up the heat in the winter, or turn down the air conditioner's thermostat in the summer.

When all these things happen at the same time, electrical demand "peaks," and the more elec-

tricity used, the higher the peak. These peaks are expensive to us, and so to our members.

If we all work together to reduce these peaks, even just a little, we can all help to control the overall cost of the peaks.

What is load management?

It involves efforts by the cooperative and its members to control peak demands and shift usage to off-peak times, to avoid high demand-related cost of wholesale power.

Power peak periods are the one or two times per day when consumers' demand for electricity is highest. As explained earlier, the highest peak usually comes early in the evening on the hottest or coldest day of the year when members come into the house, prepare dinner, turn up the air conditioning — or the heat — and use electric appliances, lights and hot water, all at about the same time. We need to pay for enough generating capacity to meet the demands of members during these peaks. And we also pay for the fixed costs for generating capacity, even though electric demands are lower during much of the year.

About two-thirds of our wholesale power cost is demand-related. If we can reduce our peak demands, we can control — or at least reduce — the demand-related or fixed costs for wholesale power.

You can help by allowing us to install load control switches on your water heater, air conditioner or geothermal system.

Look for lines before construction

Spring is the time of building. If you are thinking of erecting any new structures on your farm (bin, silo, barn, or shed), please take the existing electric lines into consideration. If you have any questions, call our engineering department before you make any plans. We will be glad to meet with you to offer our advice and recommendations.

When you are moving your equipment, you should also think of the lines overhead. A corn

dump or auger in a line can be a lethal weapon. Remember to look up and plan your route before you start. Electric lines are easy to take for granted.

If you spot a situation that you think may be a potential safety hazard, please let us know. If you see someone erecting a building or sign near our lines, let us know. We want to check on it before a danger exists.

Geothermal heating and cooling²⁹

In the last issue of the IREN, we stated that we now offer a special rate for members using a geothermal system for heating and cooling.

The rate is as follows:

\$5.00 per month facilities charge

All heating and cooling kilowatt-hours (kwh) at 5.7 cents per kwh.

Following are the provisions of the rate schedule:

1. The Cooperative shall have the right to activate switch during peak load conditions from December 1 through February 29, and July 1 through September 15, or during emergency conditions which may occur any time during the year.

(This switch is radio controlled. No one will have to come to your home to activate the switch during peak periods. Cost of this equipment and installation is the responsibility of the Cooperative.)

2. This service requires installation of a separate meter to record heating usage. Member is to provide separate circuit facilities so that the Cooperative is able to meter heating kwh usage independently.

3. It is the responsibility of the member to maintain geothermal heating units and to keep units in good repair and working order.

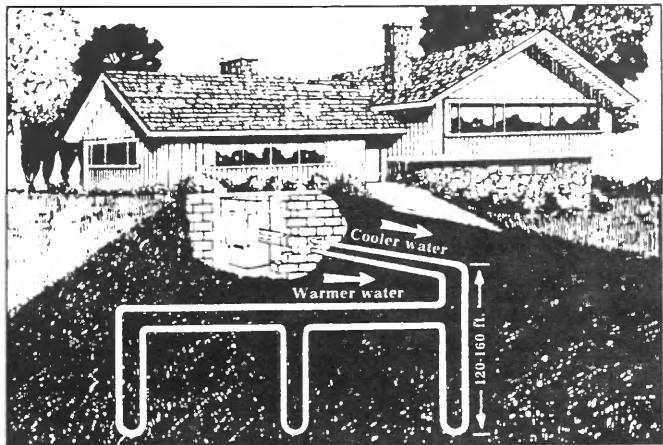
4. The Cooperative shall not be responsible for repair or maintenance of the member's heating units. The Cooperative will be responsible for the repair and maintenance of the switch and meter.

5. If there is evidence of alteration or tampering with the Cooperative's switchover device or meter, member will reimburse the Cooperative for the cost of replacement or repair of the device plus all savings derived from this rate during the previous 12 months. Cooperative may cancel agreement

and remove its equipment under these conditions.

6. Member must have an electric water heater for household use in the desuperheater system.

7. This rate is experimental in nature. The monthly rate and other provisions of the schedule



may be revised as deemed appropriate by the Cooperative.

8. Contract period is for not less than one year.

If you now have a geothermal heating/cooling unit in your home, you will need to install separate metering facilities before you are eligible for this rate (see -2). Equipment for metering is now on order; and radio control devices will be ready for installation soon. Please contact the Member Services Department for sign up on this new rate for further information about this rate.

In future issues of the IREN, we will clarify our other new rates. If you would like more information before that time, please feel free to call the Member Services Department.

Blinks indicate system is functioning correctly

Blinks in your electric service are usually an indication that something has come in contact with the electric lines. Usually these problems can be traced to tree limbs, squirrels, birds, lightning and even cattle or horses rubbing against the guy wires. When the electric line senses a problem, the breaker (which is located on the power line) goes into operation. The breaker will shut the line off for just an instant so the line may clear itself. If it doesn't clear the first time, it may blink two or three times before it shuts the

whole line off. Then, the cooperative line crews will be dispatched to clear the line. Were it not for these breakers out on the lines doing their jobs, lines and substations could be destroyed, causing many consumers to be without power. We realize these blinks are a nuisance to our members because of the need to reset digital clocks and VCRs, etc. However, these blinks are a blessing in disguise. If it were not for the oil-filled reclosers (automatic circuit closers that reset after the blink), each of these instances may have been

a long outage. Shelby Electric regrets these inconveniences, but is pleased that not all "blinks" were lengthy outages.

Electronic equipment such as microwave ovens, digital clocks, VCRs and computers are so sensitive that the slightest blink may cause interruptions. All electric utilities experience these brief outages, and these appliances are the biggest "tattletales" for electric utilities. In most cases, if it were not for the clocks you would never know the power had "flickered."

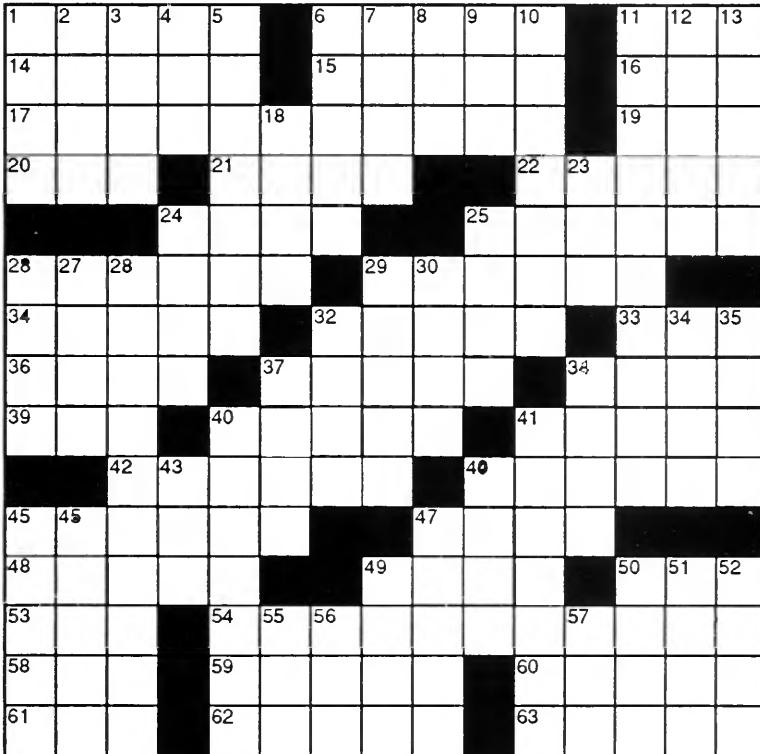
Rural Electric News Service

CROSSWIRES

By Eric Albert

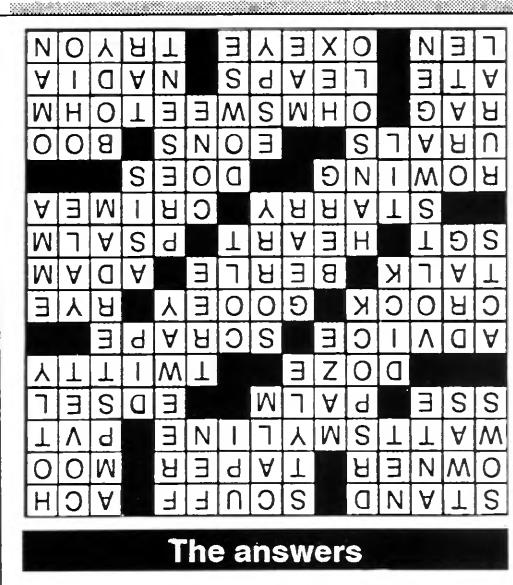
ACROSS

- Put up with
- Roughen the surface of
- "___ du lieber!"
- Deed holder
- Get progressively thinner
- Udder?
- REC's favorite game show?
- Lowest Army rank: abbr.
- Compass point: abbr.
- Reading material?
- Henry Ford's son
- Take a nap
- Country's Conway
- Helpful suggestions
- Predicament
- Earthenware pot
- Like melted chocolate
- Livestock feed
- Say something
- Comedian Milton
- First gardener
- Corporal's superior: abbr.
- Symbol of love
- Sacred song
- Vincent Van Gogh's ___ Night
- War site (1853-56)
- Using oars
- Female deer
- Russian mountain range
- Billions of years
- Ghost's greeting
- Dust cloth
- REC's favorite saying?
- Chewed and swallowed
- Jumps up
- Olympic gymnast Comaneci
- Spy novelist Deighton
- Kind of daisy



DOWN

- Female pigs
- Christmas poem beginning
- Add to a poker pot
- Tennis court divider
- Baby-book author
- Manner
- Unruffled
- news service: abbr.
- Marshy area
- No-toll road
- REC's favorite city?
- Commandment work
- With passion
- Pencil puzzle
- Go down a bit
- Actor Van Dyke
- Fig or fig
- Plays a part
- Pull along the ground
- REC's favorite car?
- Regretful
- Revolver inventor
- Toothed wheel
- George Bush's alma mater
- Jane Austen book
- Mass of ice
- "Working or not"
- Star Wars character
- Gift
- "___ Reveille" (Kay Kyser hit)
- Ice cream holder
- The R in REC
- Talk pompously
- Use a divining rod
- Catch sight of
- Murder-mystery requirement
- "Buckeye State"
- Arabic country
- Put a spell on
- The wild West?
- Roofing material



Interactive TV

Americans like to think they're high-tech, but the smartest machines in the American home are still personal computers, VCRs and video games — just like a decade ago.

So, when do we see the gadgets that will change our lives in the future? They are already here in the form of interactive home multimedia — the marriage of computers, video and audio in one system.

Some people consider multimedia to be man's most important step forward in learning and story-telling since the invention of the printing press.

According to technology watchers, music, video, publishing and consumer electronics companies that are not positioning themselves for a boom in multimedia will be left in the technological dark ages.

And Americans appear to be ready. Almost half of Americans say they look forward to new home electronics that are more entertaining and educational than the ones they currently own, according to a 1991 study of Americans' views toward electronic home entertainment conducted by the Roper Organization. Most also say they are interested in having more control and choices over what they watch and listen to.

CDTV is one way they can get those things. Commodore introduced its CDTV interactive system in 1991 and Philips offered the CD-1 system shortly thereafter. Both are in self-contained players that use CD-ROM discs and hook up to an existing TV and stereo system. Other companies jumping on the bandwagon are Sony, Kodak, Warner and Sega, with little compatibility among them.

Taking the Commodore system as an example, the machine is cabled to a television just as a VCR would be, and a disc is

inserted. As the disc plays, on-screen messages or pictures prompt the viewer to make choices on the remote control that affect future options.

CDTV users can choose from a multitude of titles enabling them to simulate everything from strolling down Sesame Street to playing 18 holes with Jack Nicklaus.

Caesar's World of Gambling, a Philips product, includes Las Vegas gaming-table gambling, including blackjack and baccarat. But there's a twist: While players evaluate their hands, both the dealers and croupiers dispense advice to the player on what the best moves would be.

CDTV also offers Grolier's Electronic Encyclopedia, which contains all 21 volumes of the American Encyclopedia on one disc. By entering a single word, an entire encyclopedia of knowledge is at your fingertips. Some entries include spoken and musical examples.

Other CDs allow would-be photographers to learn the tricks of the professionals at Life Magazine, while trying out their skills on the screen, and would enable children to create their own songs by choosing musical styles and lyrics for "Children's Musical Theater."

In the future, music fans with

CDTV not only will be able to hear their favorite groups and orchestras, but they will have readily accessible information about the groups' history and be able to tinker with the arrangements of their favorite songs.

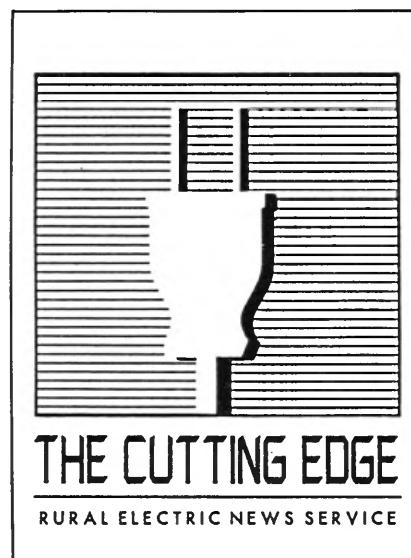
But as it stands now, interactive CDs are lots of glitz and sometimes short on programming, according to industry observers. There are relatively few titles and the systems are expensive, and sometimes intimidating. They also do not yet employ full-motion video. There is also the issue of incompatibility among the systems, meaning you could invest in a machine that becomes quickly obsolete.

However, if you don't go to interactive television, it may come to you. Pay-per-view systems are being launched in some major cities that would be the first big step toward widespread home use of interactive media systems.

In New York City, for example, viewers can subscribe to Quantum, a 150-channel interactive pay-per-view cable service. Homes in some neighborhoods have access to 15 movies at all times, including five popular new releases that start every half hour — more control and convenience than a video store at about the same cost.

TV Answer, Inc., of Reston, Va., has a different view of interactive television. The company's wireless system would allow television viewers across the country to purchase a box much like their existing cable TV boxes that would enable them to conduct banking, check their stock quotes, order items from department stores, participate in games related to sports events and register their opinions to pollsters instantaneously.

TV Answer's idea for using
(Continued on page 12d)





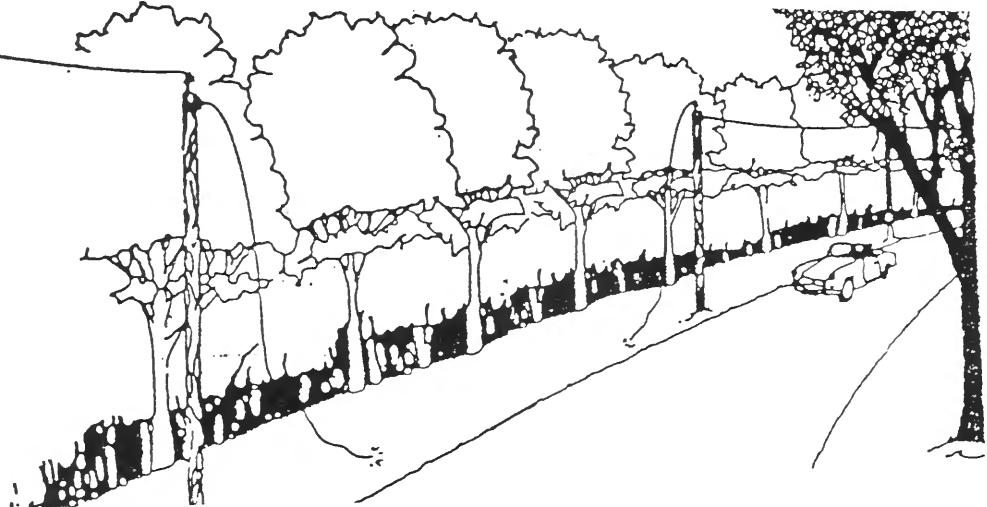
Shelby Electric News

SHELBY ELECTRIC COOPERATIVE

217-774-3986

SHELBYVILLE, ILLINOIS

Spring safety corner:



As we all know, spring is accompanied by the potential danger of spring storms. The sight above is very familiar to us at your electric cooperative. Can you identify some dangers this downed line represents?

Ask yourself:

- Is the line still energized?
- Does anyone know the line is down?
- Are there other people in the area?
- Do the children know the danger the downed line represents?

Many times we take electric lines for granted; and we forget the deadly potential of lines on the ground. Here are a few of our recommendations if you do come upon the above accident:

- Treat any downed line as a live wire
- Call Shelby Electric immediately to report the incident

Stay in the area to warn others who may come along

Educate your children about the dangers of electric lines. It is never too soon to start teaching them to respect all electric lines and appliances.

To report an outage

Call Shelby Electric any time—day or night—someone will answer your call, Phones: (217) 774-3986 or 800-677-2612.

Give the person who answers the phone as much information as possible: Your Name, Your Account Number (It starts with a letter located above your name on the meter book), Location of the problem if you know (Even a meter number or tag number on a pole will help). Give them your phone number so they can call you back for more information if necessary.

Look for lines before construction

Spring is the time of building. If you are thinking of erecting any new structures on your farm (bin, silo, barn, or shed), please take the existing electric lines into consideration. If you have any questions, call our engineering department before you make any plans. We will be glad to meet with you to offer our advice and recommendations.

When you are moving your equipment, you should also think of the lines overhead. A corn

dump or auger in a line can be a lethal weapon. Remember to look up and plan your route before you start. Electric lines are easy to take for granted.

If you spot a situation that you think may be a potential safety hazard, please let us know. If you see someone erecting a building or sign near our lines, let us know. We want to check on it before a danger exists.

High energy bills? Shut the door!

29

We at Shelby Electric Cooperative are excited about a new method of insulating and weatherizing homes, and we hope you'll find it interesting, too. It's called "RyeNovating," and is a process that has been perfected by Doug Rye, a Mableville, Arkansas, licensed architect.

We had a RyeNovation session for our employees on the afternoon of March 22, and an open house for interested people that evening.

The process involves some training, and Randy Macari of Macari Heating and Cooling, Shelbyville, is going to become a certified RyeNovator for this area. Shelby Electric will send an employee for the training, but does not plan to get into the business. Our primary interest is that it will enable our members to live more comfortably without "breaking the bank."

"If you have an energy-inefficient house," Rye says, "then it's your own cotton-pickin' fault." Rye is president of RyeNovators, Inc. He noted that even as cold as it gets in Illinois, it should be simple to build a house that will need very little heating. "And it won't need very much cooling, either", he adds.

"If you want a comfortable house that's inexpensive to heat and cool," he emphasized, "you've got to shut the door!" He added that the door in question isn't the entry to the house, but what is really the equivalent of an open door — and maybe two — that exist in just about every house that's built. "The contractors leave them there after they get done building," he adds, in the form of dozens of little nooks and crannies that permit air infiltration.

"It's not the lack of insulation that gets you," he says, "it's the infiltration. If you're in a jetliner at 30,000 feet, you have an outside temperature of -40 degrees, and a wind-chill factor of -300 degrees, and the fuselage wall of the airplane is only a couple of inches thick. They keep it from being cold not so much by adding insulation, as by preventing air infiltration. That works for a house, too."

RyeNovation involves blowing in a wet mixture of cellulose and glue, and other components, to insulate and to seal all those little holes that permit infiltration — and add up to the equivalent of an open door. The other components repel pests and make the material flame retardant.

While most of the homes that have been RyeNovated so far are in the milder climate of Arkansas, Rye notes that people who live in them are excited about the comfort level they enjoy, as well as the low energy bills, which they enjoy even more. "People tell us they don't even know when the weather changes outside," he says.

Rye says he got the idea to look for a better



A RyeNovator sprays a mixture of cellulose insulation and glue into a stud cavity, in this demonstration. The mix fills the cavities well and prevents air movement.

infiltration-fighting material when he saw a workman putting up fiberglass insulation. "He was plainly visible through the batting," he says.

If there is a disadvantage to cellulose, Rye says, it's that the initial cost is a little higher. "But that's partly offset by the fact that a bad job of installing cellulose insulation is far better than even a very good job of mineral wool installation. And with the better sealing against infiltration, there's no need for a house wrap, which costs a lot of money and doesn't really do any good. And with wet-blown cellulose, it's possible to heat and cool with a smaller units."

Rye, who is setting up dealerships in Illinois for those who want to RyeNovate homes, hopes that a lot of people in the state will want to enjoy more comfort — and save a lot of money — by RyeNovating. We believe it's a good system, too. Call us if you'd like more information.

**Shelby Electric Cooperative's
Annual meeting
is set for Friday, June 25.
please mark your calendar
and plan to attend!**



Time to DUCK again!

Ahhh, it's great to be outside again, even if it means there's work to be done. The TV antenna's a little crooked, there are some tree limbs to cut, and the ol' swimming pool will need cleaning. That means it's time to DUCK. When you're moving the grain auger, raising the TV antenna — anytime you use tall equipment — make sure you stay clear of the power lines. Duck down and keep poles, augers and other equipment away from overhead electric wires. Whether you're outside your home or out in the farm field, get your jobs done the safe way.

Look up and live.



Electric Cooperatives of Illinois

Good for ALL Illinois

(Continued from page 12a)

radio waves to link viewers with retailers, marketers, advertisers and networks is more practical than the other existing and potential forms of interactive television, according to Sallie Olmstead, director of Public affairs for TV Answer.

"The consumer doesn't care how they get the interactive element in and out of their house," she said. "They care that the services are fun, entertaining. Do they save me time and can I do

some practical things with it?

"We know we have a willing and ready audience. "We believe the way for them to interact is through the existing TV set."

TV Answer is now applying for licensing of its product in New York, Chicago, Los Angeles, Boston, Washington, D.C. Houston, Dallas and San Francisco, with plans to begin operation in early 1993.

Advertising industry experts predict some kind of interactive TV will be in 40 percent of U.S.

homes by the end of the decade, cutting the prime-time shares of the major networks from 60 percent to 45 percent by the year 2000.

Such a change will not only revolutionize viewing habits, but advertising as well. Watch out, some say, that someday your video movie obtained via interactive television does not include this familiar dialogue: "We pause now for a commercial break."

—Rural Electric News Service

New tools for the elderly and others in need

One's best friend may be a dog, but the elderly and chronically ill may find a more useful companion in HANC—a generation of devices designed to help the handicapped live more independent lives.

HANC (home-assisted nursing care) is being developed by Stephen Kaufman of HealthTech Services Corp. of Northbrook (near Chicago) and is designed to take on many of the tasks that once could only be performed by expensive round-the-clock medical personnel.

The robot starts in the morning with a wake-up call and a reminder of daily activities. If a person does not answer back or if problems arise, HANC is designed automatically to make phone calls for help to health-care coordinators and family members, as well as to community emergency services.

When asked, HANC provides instructions on changing dressings and how to perform various medical chores. It can take blood pressure, pulse and temperature readings, and dispense pills.

"Senior citizens want to stay in their own homes, but often they are forced to move to a retirement village or a nursing home because they feel a need for continuously available support," Kaufman said in a recent report.

"Many people can't afford a private nurse at home 24 hours a day, and the truth is they don't really need a live-in nurse; they need HANC."

The machine stands about four feet tall, resembling a locker with a video display terminal on top. It has a drawer that opens to release blood-pressure monitoring equipment and another opening through which medications and other items are dispensed.

HANC is expected to reach the market within two years.

Besides general problems suffered by the elderly, there are about one million Americans immobilized by accidents or illnesses such as multiple sclerosis, muscular dystrophy and Guillain-Barre syndrome. At least one new high-tech device—the Iowa electronic elbow—is designed to help return independence to these people.

Electrobionics Corp. of Ankeny, Iowa, is just beginning to market the elbow after years of research and development funded by the State of Iowa and private investors. Although electronic limbs have existed for a long time, the elbow is designed to help a patient's existing but non-functional arm work again.

It consists of an orthopedic brace with a programmable actuator attached. The device runs the elbow through a range of motion, stopping at desired positions. The patient can control the device through shoulder, head or foot movements.

The elbow was a technological and design challenge, according to its maker, Bob Singer, president of Electrobionics.

"It's completely different than anything that's out there today," he said. "It's actually easier to design and build an artificial limb. We're creating robotics systems that take the paralyzed limb along for the ride," which is difficult because of problems with weight and load.

Although the number of people who would benefit by the elbow is considered small, Singer said, "We want to help the people who have no options, no technology and no choice but to remain paralyzed without function."

And he has bigger applications in mind.

"I have a vision of a complete upper extremity system that will control the elbow, wrist and hands and make paralyzed people functional."

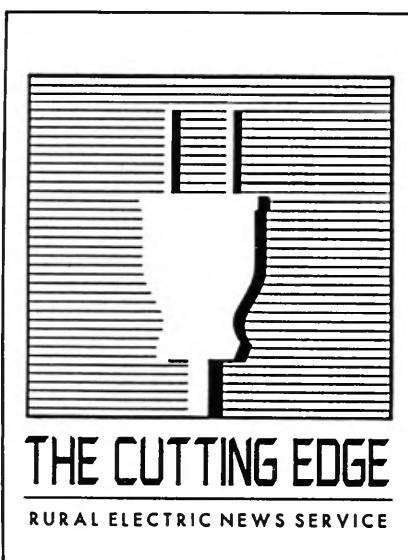
For those who have lost limbs, the technology just keeps getting better. In June 1992, a Swedish woman became the world's first recipient of artificial legs attached to permanent anchors in the bone.

Many amputees find that hard work in rehabilitation combined with high technology can mean a return to full mobility, including sports.

At Moss's Gail Analysis Laboratory in Philadelphia, for example, patients are custom-fitted with leg prostheses through the use of video cameras and "force plates" in the floor that measure a patient's steps precisely.

Like sensitive scales, the electronic plates record the pressure as a patient steps down and they measure side-to-side and front-to-back forces. A computer-driven laser shows the force and direction of the step as a bright red line, and a two-way mirror

(Continued on page 12d)





Shelby Electric News

SHELBY ELECTRIC COOPERATIVE

217-774-3986

SHELBYVILLE, ILLINOIS



Congressman Glenn Poshard (D-19) speaks to those who met at Shelby Electric's office to seek a solution to their water problems.

Search for water begins

Water you doing with your spare time these days? If you're like many people in Shelby Electric Cooperative's service area, part of what you're doing with your spare time is hauling water. We'd like to help you do something about that, while also helping the area's economy.

Some 100 persons took a big step toward a possible solution to their water problems Monday, April 12, at the Shelby Electric Cooperative headquarters in Shelbyville.

They met with Congressman Glenn Poshard (D-19) at a meeting organized by James E. Coleman, manager of Shelby Electric, and attended by representatives of the state and federal agencies that would necessarily be involved in such a project. Most of those who attended represented small towns and farm groups in Shelby, Macon, Christian and Moultrie Counties.

"People sometimes ask me why an electric cooperative should have an interest in the area's water problems," Coleman said in explaining why the co-op had gotten involved, "and I tell them that Shelby Electric was founded in 1938 to improve the quality of life in the rural areas. That's what we're all about — improving the quality of life."

"I've had discussions with many interested individuals," he continued, "and it became obvious that this area is facing a serious water problem. The City of Pana is having particularly severe difficulties, and Taylorville has experienced the onset of a water quality problem that can only continue to worsen as the demand for additional water increases."

"In the rural areas around Taylorville where area water lines are not available," he went on,



Top photo: James Coleman, manager of Shelby Electric, outlines a system map. **Above,** Marla Berner tells Poschard of Pana's water problems.

"the rural homes and farms have been forced to import water for domestic use. Farmers and stockmen have to haul thousands of gallons on a daily basis in order to provide supplemental water for their stock."

He added that it's an everyday occurrence to see local people filling water containers at the Corps of Engineers facility at Lake Shelbyville and that people shouldn't have to do that, just because they choose to live in a rural area.

He elicited a chuckle from the crowd by adding, "We believe rural people should enjoy the same kind of lifestyle as anybody else — except for the crime rate."

On a more serious note, he said, "If there's something we can do to help improve our service area, we have the expertise and staff in place. We'll do what we can."

Noting that a shortage of water is more than just an inconvenience, Coleman said, "Small areas communities are facing more and more stringent guidelines for potable water. The costs associated with meeting these guidelines has become a heavy burden on Illinois communities already suffering from a declining population, high unemployment and eroding tax revenues."

Poschard noted that as a Congressman in a new district, he'd only been on the job four months, and that he didn't want to intrude on a jurisdiction that already existed. But if there wasn't one,

he would help set one up, if that was what was needed. "I'm not here to step on any toes," he stressed. "Instead, I'm here to determine if there's a problem of water quality and/or quantity in this area."

"If you tell me there is, I want to help you find a solution. It's as simple as that."

Poschard then asked those who were concerned about the water situation to raise their hands. Most did, and a few noted that they expected problems "within the next 10 years."

Marla Berner, director of the Office of Community Development for the City of Pana, noted that her town, halfway between the county seats of Shelby and Christian counties, had suffered water problems in varying degrees for at least the last 10 years.

"The recent rainfall we've had is going to help in the short term," she said, "but it's not going to solve what has become a long-term chronic problem for the City of Pana. Our reservoir isn't big enough to do the job on its own, and the wells we've drilled haven't solved the problem either."

Poschard, commenting on his experience with other towns who were reluctant to work with each other, asked if all those attending were willing to work together to find a supply of quality water and build a regional treatment facility. Hearing no dissent, he asked if there was anybody who didn't want to work with any others. Nobody responded.

"Will we be intruding on any other jurisdiction?" he asked. A quick look at the posted maps indicated that there should be no conflict, and Poschard asked if the water in Lake Shelbyville would be fair game as a possible source.

Bruce Barker, who represented the State of Illinois Department of Transportation's Division of Water Resources, noted that his department owns the water in the lake, and that it had been built partly for that purpose. "At the time it was planned," he said, "one of the reasons for building it was to provide a water supply. Obviously there were also other reasons, such as recreation and flood control. We believe there would be a safe yield of 20-million gallons a day, and the communities represented here have indicated a need for about half that. There shouldn't be a problem getting water."

Representatives of other organizations, such as the Illinois Department of Commerce and Community Affairs, the U. S. Farmer's Home Administration, the Corps of Engineers, U.S. Economic Development Administration and the Illinois Bond Bank offered to help as much as they could.

With that, Poschard suggested that members of the group meet with Coleman in the near future and form a steering committee to move forward with the formation of a regional water district.

We'll keep you posted as time goes by.

Illinois would be dark without us

In 86 of the state's 102 counties, electric cooperatives are faithfully serving more than 600,000 citizens. They were formed years ago by people who united to improve their lives.

Though the first mission was to bring electricity to remote areas, today the role of these not-for-profit utilities has expanded to help better the quality of life in many other ways. Now an established part of their communities, the electric cooperatives are working to attract and keep local businesses, to provide safe water supplies, to provide up-to-date TV and telecommunications, to support civic, social and youth activities. They are good neighbors, and they still have a lot of work to do. As long as there are people living in that three-fourths of Illinois, the electric cooperatives will be there to serve them.



Federal subsidies to electric utilities per consumer

Municipal utilities	Investor-owned utilities	Electric cooperatives
\$92.47	\$60.17	\$39.48



Electric Cooperatives of Illinois

Good for ALL Illinois

(Continued from page 12a) superimposes the line on the video of the moving leg.

Electronic arms that can grasp and hold are helping arm and hand amputees as well, and special appliances have been

devised that allow patients to attach tennis and squash rackets, billiard cues, croquet mallets and the apparatus of other games to otherwise unused stumps.

Whether it's a talking robot,

an elbow from Iowa or an electronic arm, "state-of-the-art" is now an important factor in enhancing the lives of the handicapped and disabled.

—Rural Electric News Service.

Biotech produce — coming soon to a grocer near you

There may be more than randomly arranged greens in your salad of the future. Some of the genetic material inside those vegetables could be tossed around as well.

The long-delayed biotech revolution in agriculture is finally coming, and it means either the answer to all farmers' and grocers' problems or the possible end of civilization as we know it, depending on who you talk to.

Agriculture biotechnology, or genetic engineering, involves altering plants or animals by splicing DNA, the series of genes that makes an ear of corn an ear of corn or a human a human.

The first of many new crops invented through biotechnology is due on grocery store shelves in early fall. It is the Flavr Savr tomato, the product of eight years and \$20 million in research by Calgene Inc. and the Campbell Soup Co. One of the tomato's genes has been modified to retard spoilage, and its developers say that means consumers can soon have a ripe and tasty alternative to the often pale, mushy and bland variety now available at non-harvest time. The new tomato will be more expensive than the kind that is harvested green and chemically ripened.

"Your backyard tomato is the gold standard," said Steve Benoit, vice president of marketing for Calgene Fresh, a subsidiary of Calgene, Inc. "That's what we're striving for."

Benoit said the first Flavr Savr won't be backyard quality "but the technology will allow us to eventually introduce those heirloom varieties. This is the first step. This will be a taste that reminds you of the backyard."

Calgene CEO Roger Salquist predicts the company will sell \$500 million worth of Flavr

Savrs by the end of the decade, but the tomato has already become a lightning rod for a growing controversy over technological manipulation of the food supply.

Some growers, consumer groups, environmentalists and even chefs oppose rearranging of genes in produce.

There is no evidence of any health threat from the high-tech tomato, but it is the target of a vocal "Pure Food Campaign" by anti-biotech activist Jeremy Rifkin, who has called for a boycott. Public acceptance of the tomato could signal the future for hundreds of other genetically engineered plants being developed with a total \$1 billion investment by various biotech companies. Among them is corn that resists insects, diseases and herbicides; raspberries that stay fresh longer; potatoes with less starch to improve frying; cheaper and more nutritious oils; and BST, the controversial growth hormone that makes cows produce more milk. After a fierce opposition campaign by Rifkin, BST's approval is now languishing at the Food and Drug Administration.

Today's genetic manipulation of plants is relatively simple:

Want to make carrots with more beta-carotene? Find their beta-carotene gene. Take it out. Speed up its time clock. Put it back. Rifkin and other opponents fear that simple process could lead to more complex and controversial technology.

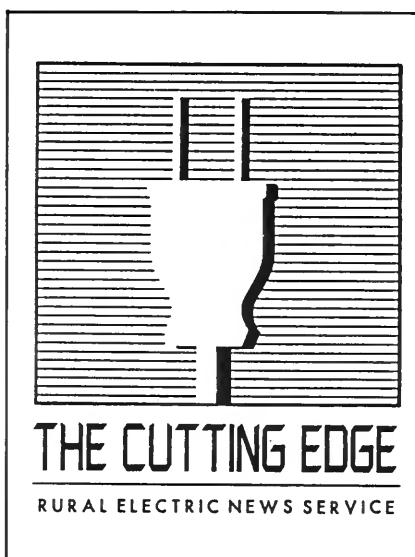
An experiment at one company, for example, involves inserting a flounder gene into a tomato to help it withstand freezing. Is this some violation of natural law? What would it mean to vegetarians and certain religious groups? Are there unforeseen environmental or biological effects? And, what happens when human genes start making it into the gourmet section?

Henry Miller, director of FDA's Office of Biotechnology, compares genetic engineering to crossbreeding plants. In a newspaper article, he pointed out that vaccines against measles, rubella and polio were genetically engineered.

"For decades, genes have been transferred from one species to another . . . to yield commonly available food plants, including oats, rice, currants, potatoes, tomatoes, wheat and corn," he wrote. "The techniques of what some call the 'new biotechnology' — gene splicing, tissue cultures and the rest — essentially speed up and target with greater precision the kinds of genetic improvement long carried out by other methods."

But even some in the biotechnology industry say the government has gone too far in easing safety tests for genetically engineered foods. Under new regulations, producers do not need USDA permits to grow most gene-altered versions of corn, potatoes, tomatoes, soybeans, tobacco and cotton. At

(Continued on page 12d)



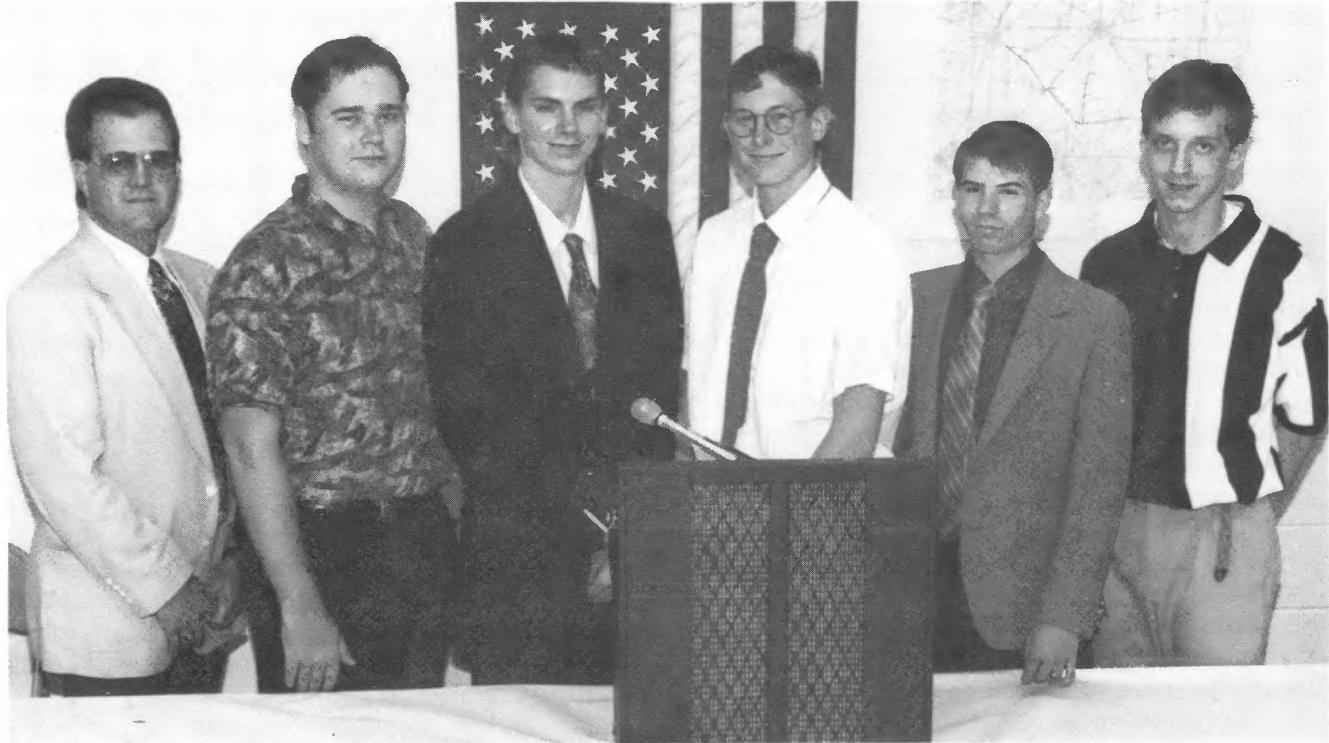


Shelby Electric News

SHELBY ELECTRIC COOPERATIVE

217-774-3986

SHELBYVILLE, ILLINOIS



Two Findlay High School students are the grand prize winners of Shelby Electric Cooperative's Youth to Washington tour competition. Dustin Yantis and Jeff McDonald were selected as the top two finalists in the cooperative's essay contest, which concluded at Shelby Electric's essay dinner on Thursday, May 20 in Shelbyville. The two were selected from a group of six semi-finalists in the competition, open to area high school sophomores and juniors. With Shelby Electric manager Jim Coleman, left, are: first runner-up Jeremy Vadakin, McDonald, Yantis, and Colby Bradford, all of Findlay; and Matthew Holley, Shelbyville. Missing from the group is semi-finalist Stacy Adrian, Findlay. The Shelby Electric student contingent was part of a group of nearly 70 high school students representing the electric and telephone cooperatives of Illinois in the nation's capital June 18-25.

Essay contest results announced

Two Findlay High School sophomores will be visiting Washington, D.C., in June courtesy of Shelby Electric Cooperative. Jeff McDonald, son of Mr. and Mrs. James McDonald of rural Shelbyville, and Dustin Yantis, son of Mr. and Mrs. Roy Yantis of Findlay, were named winners of the 1993 "Youth to Washington" Essay Contest on May 20.

At a banquet held at the Cooperative community room, six contest finalists presented their essays titled "Electric Cooperatives in the 90's — Providing More Than Power." In addition to

McDonald and Yantis, the finalists were: Colby Bradford, son of Mr. and Mrs. Larry Bradford of Findlay, Jeremy Vadakin, son of Mr. and Mrs. Gene Vadakin of Findlay, Matt Holley, son of Mr. and Mrs. James Holley of Shelbyville, and Stacy Adrian, daughter of Mr. and Mrs. Danny Adrian of Findlay.

The essay contest is begun in January of each year by contacting the English instructors at all 17 high schools in the Cooperative's service area. The instructors are urged to provide information and entry blanks to their sophomore and junior

classes. Each entry blank received at the Cooperative is followed up with a packet of source information and rules of the contest. This year, 37 entry blanks were received from five area high schools. Seventeen essays were received from Findlay High School, one from Taylorville High School, and two from Shelbyville High School — for a total of 20 essays received.

An independent and impartial judge each year reads and evaluates all essays received (each essay is numbered, and the name of the author and high school is not revealed to the judge). From the entire field of essays the six best are chosen to become finalists in the contest. All six finalists were guests of Shelby Electric at Youth Day activities sponsored by the Association of Illinois Electric Cooperatives in Springfield. The Shelby finalists joined students representing 16 Illinois cooperatives for meetings with their area legislators and tours of the famous Springfield sites.

At the finals banquet all six students presented their essays to the Cooperative board of directors

and employees, their parents and teachers, and to 2 an impartial judge. Once again, each student presented the essay anonymously — no names or schools were revealed until the end of the contest. Each presentation and essay was judged on originality, content, accuracy, composition and oral presentation.

This year's winners, McDonald and Yantis, joined winners from across Illinois and travelled by bus with the Association of Illinois Electric Cooperatives group to Washington, D.C. In the capital, activities were planned for the nation's contest winners by the National Rural Electric Cooperative Association. The Illinois group toured such places as Mt. Vernon, Arlington National Cemetery, the Smithsonian Institution, and, of course, the U.S. Capitol building. They met with their Senators and Representatives. All in all, an unforgettable week!

We at Shelby Electric congratulate our 1993 winners. We also commend the efforts of the four finalists on their excellent entries and presentations.

Cooperative to launch DirecTv service

How many times have you wished for an affordable satellite dish system? How many times have you thought that there must be an alternative to that bulky dish on the lawn? Shelby Electric has a solution to your problems: DirecTv is coming to the cooperative service area in the spring of 1994. The system, also called DBS (Direct Broadcast Satellite) uses an 18-inch fixed position dish, receiver/decoder, and remote control. This equipment package will be available at a very affordable price.

Several major cable channels have signed on to provide programming services for the DirecTv packages. The Family Channel, USA Network, Superstation TBS, Cable News Network, the Cartoon Network, Sci-Fi Channel have all signed agreements to provide entertainment programming. The DirecTv service will carry approximately 150 channels of subscription and pay-per-view programming.

Shelby Electric Cooperative is affiliated with the National Rural Telecommunications Cooperative, which is responsible for offering DirecTv service in rural areas.

When the service launches next spring, Shelby Electric customers will be among the first to enjoy this affordable, convenient service. The truly small dish, the easy to use equipment, the fine line-up of programming, and the price of equipment and programming makes the service ideal for either first time customers, or customers wishing to replace the large outside dish. The compact unit being offered will fit nicely into landscaping, on a deck, or attached to a window sill.



Along with these great features, DBS offers the most advanced direct-to-home satellite technology ever developed. Using high powered digital signals, this new generation of satellites is set to beam flawless signals no matter where you live. Those of us in the rural areas will no longer have to be content with a snowy television picture — or no picture at all. Picture quality will be similar to super VHS tape, and will be accompanied by audio that compares to that of compact disc recordings. New Thompson digital compression technology is used.

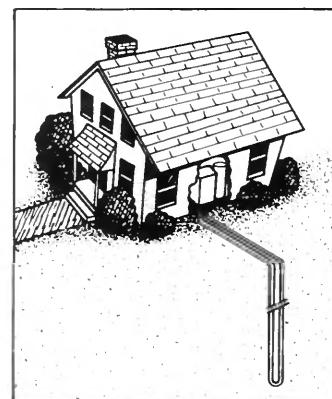
If the idea of high-quality, small dish television programming at an affordable price appeals to you, just give the office a call. We will be glad to share our knowledge of DirecTv with you.

.....

Getting the job done **TOGETHER** Electric Cooperatives of Illinois

Not far from the Mississippi River in western Illinois, there's a new subdivision in which all of the houses are heated and cooled by geothermal systems. The geothermal system's underground liquid-filled loops carry energy from within the soil, a method four times more efficient than fossil-fuel systems. The local electric cooperative played a big role in getting this low-cost heating and cooling system installed throughout the subdivision. All around Illinois, electric cooperatives are encouraging their members to install a geothermal system because it is the leader in safety, comfort and economy.

The geothermal system improves the quality of life for members, something that electric cooperatives have been doing for more than five decades. They are working in all kinds of ways to make life better in rural areas. It's a job that's far from over, and it takes people working together to accomplish it. *There's a word for this. Cooperation.*



Electric Cooperatives of Illinois

Good for ALL Illinois

(Continued from page 12a)

the FDA, new rules allow foods produced by genetic engineering to be regulated under existing rules for foods developed by traditional methods.

As for the Flavr Savr, Benoit says it will be openly labeled when its hits stores, and he believes consumers will be

receptive.

Members of the public who are aware of genetic engineering are wary, according to a survey conducted for the USDA. It suggests that public education is crucial for commercial success, although Benoit counters that consumers have more pressing worries than whether a gene in

their tomato has been rearranged.

"We're going to tell folks genetic engineering is used and we think it's going to give them a reason to believe for the first time that when somebody says it is a vine-ripened tomato it really is a vine-ripened tomato," he said.

—Rural Electric News Service

Of the 14 million people with diabetes in the United States, about half don't know they have it. The consequences of living undiagnosed with diabetes — the nation's seventh leading cause of death — can be fatal.

The American Diabetes Association aptly labels this chronic disease a "silent killer." Its signifying trait is high blood sugar, triggered by an inability to turn food into fuel.

Ordinarily, the body converts food into a form of sugar called glucose. With the aid of insulin, a hormone produced by the pancreas, glucose travels from the blood to the cells to be used for energy or reserved until needed.

People with diabetes, however, either can't produce insulin, secrete too little of it, or have difficulty using this life-sustaining hormone. Glucose accumulates in their blood, raising blood-sugar levels. Left untreated, high blood sugar can lead to the build up of poisonous acids called ketones in the blood and urine, causing possible coma or death.

Although there is no cure for diabetes, high blood sugar can be controlled with proper treatment and nutritional planning. Before diabetes can be controlled, however, you must know you have it.

Fortunately, there are warning signs: insatiable thirst, excessive hunger, frequent urination, unusual weight loss, extreme fatigue and irritability. All may indicate the onset of the two most prevalent types of diabetes, insulin-dependent diabetes and non-insulin-dependent diabetes. In the first, symptoms appear suddenly. Treatment includes daily insulin injections, coordinated with special meal plans and regular exercise. Those most at risk of insulin-dependent diabetes (once called juvenile-onset diabetes) are children



Diabetes: Measuring the odds

and young adults.

The more common non-insulin-dependent diabetes typically occurs in people over 40, who are overweight and have a family history of diabetes. Here, the warning signs come on slowly and may include blurred vision, slow healing cuts or bruises and numbness or tingling in the hands and feet. In this case, people normally produce some insulin, and therefore usually don't require insulin injections. Instead, they regulate their blood-sugar levels with carefully supervised diets and exercise programs.

Some pregnant women develop a less common form of the disease called gestational diabetes. Though most regain normal sugar levels after giving birth, certain women with gestational diabetes have an increased risk of developing non-insulin-dependent diabetes.

Diabetes is believed to be a genetic, or inherited, disease, posing greater risk to some groups, such as Hispanics, African Americans and American Indians. No one has studied whether diabetes is more widespread in rural or urban areas.

Still, experts conceded that the factors hindering rural health care — low-income and limited access to medical providers and facilities — make dealing with diabetes harder for those in rural areas.

Good health care is critical for people with diabetes, because when blood-sugar levels remain too high for too long, vital organs undergo life-threatening damage. Some diabetics may not realize they have diabetes until they develop a complication, such as kidney or heart disease, or circulatory problems that can lead to lower-limb amputations.

Colorado's Eastern Plains Diabetes Project is one of 27 federal programs geared toward reducing the frequency and improving the treatment of two preventable diabetes-related complications: eye disorders and high blood pressure.

Project coordinators have asked health care providers in this rural region to refer patients with diabetes to the Eastern Plains program. That way, participants can receive reminders, by mail or phone, about eye exams, blood pressure screenings and follow-up appointments.

About 3,500 people living in the Eastern Plains have diabetes, and the network is in touch with 1,200 of them. Connie Fettters, director of Colorado's Diabetes Control Program, says the project serves a crucial purpose, noting that the symptoms of diabetic eye disease or hypertension often go undetected.

Similarly, indications of diabetes also may appear vague, says Dawn Satterfield of the Centers for Disease Control. Some people, she explains, simply adapt to the warning signs. "They'll get up to go to the bathroom four or five times a night and not think anything of it, not realizing that this is a sign of diabetes."

(Continued on page 12d)



Shelby Electric News

SHELBY ELECTRIC COOPERATIVE

217-774-3986

SHELBYVILLE, ILLINOIS

Our 55th annual meeting

Shelby Electric Cooperative lost a long-time director at its annual meeting June 25, at the 4-H Fairgrounds. L. Eugene Boldt of Stewardson, 33-year member of the co-op board, had earlier announced his intention to step down. He received a plaque in recognition of his dedicated service to the member-owned electric utility. Darrell Shumard, a Strasburg farmer, was elected to replace him. Kenneth Kensil of Tower Hill was reelected. Both men will serve three-year terms.

James E. Coleman, manager, told some 500 members and guests that the rural electrification program is facing challenges such as it hasn't faced in many years, as the Clinton Administration seeks ways to reduce the budget deficit. "There have been a lot of changes over the last few years," he said, "with the cold war apparently over and 100 new faces in Congress. I believe all this means change, and change is going to take place whether we want it to or not. Our main question is how is the co-op going to be affected and what can we do about it?"

There have already been changes, he said, adding that the co-op is becoming more than just a provider of electricity: it is also a framework or structure to which many important services can be attached.

"In addition to providing electricity," he said, "cooperatives have entered other fields to help make life better and to bring up-to-date conveniences to the countryside. Satellite television is one example. Pagers, cellular-type phones and two-way radios are others."

As an example, he cited a program the co-op kicked off at the meeting — direct satellite TV programming from an orbiting satellite to an 18" dish at the consumer's home. "It'll provide a sharp, clear picture from a dish that is inexpensive, easy to install and simple to use. The programming itself is competitive with that from city cable companies," he said, adding, "we've hired Marla Berner of Pana to head up the program."

Coleman added that the electric cooperatives also provide a strong voice representing rural residents before state and federal legislators, and

had, at the request of Rep. Glenn Poshard, gotten involved in the effort to start a water district for Shelby County and parts of adjacent counties.

"We're looking at the possibility of generating electricity from the Shelbyville Dam, too. If it proves feasible, it'll be a source of renewable, non-polluting energy. If it looks like it'll save our members money, we'll at least look at it," he said.

Neil Pistorius of Blue Mound, president, emphasized that the co-op's original mission — providing the best electric service at the lowest possible cost — is still "number one," and alluded also to Coleman's remarks about the govern-



Mr. and Mrs. Theodore Arnold of Oconee were the winners of both a food dehydrator and the grand prize, a cordless electric lawn mower. Neil Pistorius, president, made the presentation.



Manager Jim Coleman and new employee Marla Berner display the small satellite television receiver dish that will soon be available from the cooperative.

ment's attitude toward the electric cooperatives. "We know that there is need for improvement in our system, but we also know that rural electrics receive substantially smaller subsidies per consumer than other systems do. Municipal electric systems receive an average of \$93 per consumer per year, while investor-owned utilities get about \$62. We receive about \$46. But when the bureaucrats or the media start talking about cutting costs, the co-ops are always the first place they look."

"That leaves us with quite a challenge," he said, "because people are more scattered throughout rural areas than they are in cities. So co-ops have far fewer consumers per mile of line. This means fewer people to share the cost of operation and maintenance."

Kensil, treasurer, reported that the co-op had ended the year with kilowatt-hour sales some 4.4-million lower than the previous year's, due largely to an unusually mild winter and a surprisingly cool summer. Total operating revenues were also down. "We had operating revenues of \$14,952,314," he said, "and that's just over \$101,000 lower than they were last year, when we had \$15,053,325."

He also reported that the cost of purchased power had increased slightly, going from \$11,423,404 in 1991 to \$11,683,125 last year.

Doug Rye of RyeNovators, Inc., a Mablevale, Arkansas, insulation firm, was the featured speaker, and the Gene Trimble Clown Band provided entertainment.

After the meeting the board met in reorganizational session and reelection Pistorius president, Robert H. Primmer of Findlay vice president, Lawrence D. Oller of Taylorville secretary and Kensil, treasurer.



James E. Coleman, right, manager of Shelby Electric Cooperative, congratulates the two men who were elected to the co-op's board at the co-op's 55th annual meeting. From left are Kenneth Kensil of Tower Hill, Darrell Shumard of Stewardson and Coleman.



L. Eugene Boldt of Stewardson, right, received a plaque honoring him for his 33 years of dedicated, unselfish service to Shelby Electric and its members. Neil Pistorius of Blue Mound, president, left, made the presentation.



The co-op's board. Seated from left are Lawrence D. Oller of Taylorville, Neil Pistorius of Blue Mound, Robert H. Primmer of Findlay and Kenneth E. Kensil of Tower Hill. Standing from left are James E. Coleman, manager, Victor Jostes of Nokomis, Darrell Shumard of Stewardson and Richard Boggs of Macon.

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Getting the job done **TOGETHER**

Electric Cooperatives of Illinois

The horse and buggy pulls up to the lantern-lit farmhouse, and the kindly old man with the black bag goes up to comfort the expectant mother. A charming but bygone image, since today many rural areas have no health care personnel or facilities close by. However, as they've dealt with so many other needs, local residents are working together to provide for themselves. In one central Illinois county, two directors of an electric cooperative led the effort to bring medical personnel into a small-town clinic. That's one of the things that makes an electric cooperative different from other utilities. The people who work for it or serve on its board are part of the community, like the members they serve. As locally owned businesses, they have a stake in the well-being of their members. They are working to attract and keep jobs in the area, to bring in good supplies of clean water, to improve the rural health care situation. Success comes when many people work together toward a common goal. And the electric cooperatives are one of America's great success stories.



Electric Cooperatives of Illinois

Good for ALL Illinois

(Continued from page 12a)

Myths about the disease also can blur its real risks, adds Satterfield. One myth says that diabetes is rare, when in fact, every 60 seconds at least one person is diagnosed with it. Told they have what doctors call

"borderline diabetes," or diagnosed with "a touch of sugar," some people might feel safe ignoring the potential dangers of diabetes.

But, Satterfield insists: "There's no such thing as a 'touch of sugar.'" With diabetes,

it's always serious."

The American Diabetes Association has a simple test you can take to assess your risk of diabetes. To receive it, contact your local ADA chapter, or call 1-800-232-3472.

—Rural Electric News Service

Rosie the robot: Coming to your home soon?

Scrubbing toilets tops the list of dreaded household chores—but a robot wouldn't mind doing the dirty deed, or at least it wouldn't complain.

Metal maids with electronic brains could be just beyond the bathroom doorway. But don't look just yet for Rosie, the aproned robot who lovingly kept house for the space-aged Jetson cartoon family.

Service robots are faceless, often armless and definitely don't wear aprons. Already there are dozens of Roscoes, Obies and Maxwells running around hospitals delivering food, medicine and patient charts. There are robots who scrub toilets and polish mirrors in a pilot project for the U.S. Postal Service. There's even a security robot that quietly patrols the Los Angeles County Museum of Art, checking for fires, intruders and high humidity that might damage priceless paintings.

But so far there actually isn't a version of the Jetsons' fictitious Rosie to work in the home.

"We are still in the very early stages of attempting to develop a useful household robot. . . . There is still a great deal of debate about it," said Jeff Burnstein, managing director with the International Service Robot Association. "A home is not as structured, and it is much more complex than, say, a hospital. There are still many technical hurdles to clear and there is the high cost to the consumer."

A household robot will cost around \$50,000, and is at least three years and \$15 million worth of research away from becoming a reality. Some argue no amount of robotic dusting and mowing could justify that sum for an average household,

but Gay Engelberger, Marketing Director for Transitions Research Corporation (TRC) in Danbury, Conn., says it's worth the high price.

"We believe these household robots could also serve as important aids to the elderly, infirm and homebound," she said. "Although the initial price tag is high . . . it could end up as a cost-cutting measure in the big picture. Any delay in putting people in nursing homes would help the economy and greatly improve the individual's quality of life."

Consider someone who lives alone and uses a cane or walker to get around. "If this person goes to a great deal of time and pain to travel from the bedroom to the living room and then finally sits down to read, only to remember the reading glasses are back in the bedroom, it's a desperately sad situation," Engelberger said. "I think sheer frustration sometimes puts people in nursing homes."

Engelberger's group has applied for federal grant money to get "Help Mate Junior"—a robot with attached refrigerator, portable phone and medical

equipment—off the drawing board and into the home.

Junior also would have drawers and compartments for items such as tissues, medicines and reading glasses.

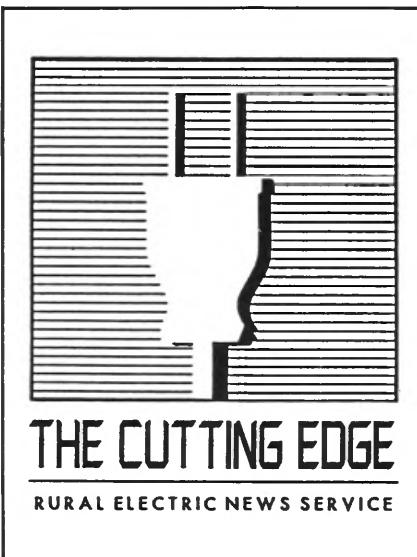
To navigate from kitchens to bathroom without bumping into garbage cans or children, household robots might use ultrasonic sonar systems. Tim Orwig, communications director with Cybermotion, a company in Roanoke, Va., specializing in security robots, likened the system to "a bat winging its way through the dark. It sends out sounds too high for humans to hear, which bounce off the walls and echo back information. The robot's on-board computer system 'hears' the information and sends it to a computer console—which could be several miles away, but which acts like a police dispatcher—and tells it where to go next."

Service robots get their energy from batteries, Orwig explained. A security robot might rove for eight hours non-stop over miles of hallways and corridors before a programmed message tells it to head for the recharging unit to plug itself in for a three-hour recharge.

That may sound like a quick nap for a tired robot, but Orwig warned against comparing the mechanical helpers to people.

At around 450 pounds, with the dimensions and look of a squat, roving refrigerator, service robots don't look anything like the friendly cartoon, Rosie.

"These are smart machines, but they are not mechanical persons," said Orwig. "The myth about them is indeed a myth: They can't replace people. They can augment people and do the jobs that are too boring, too dangerous and too tedious."



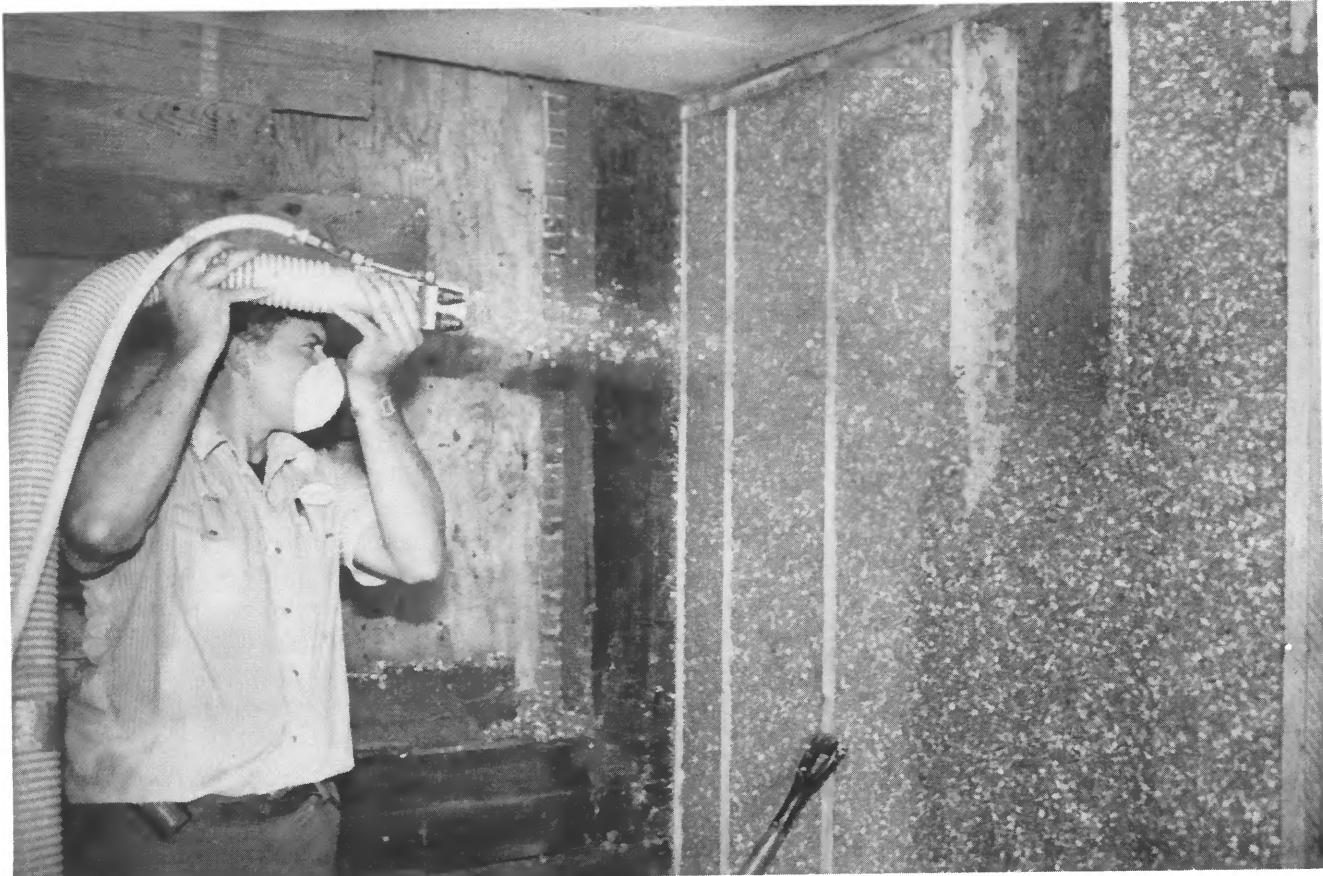


SHELBY ELECTRIC COOPERATIVE

Shelby Electric News

217-774-3986

SHELBYVILLE, ILLINOIS



Tom Fleshner, a Macari employee, blows a mixture of cellulose insulation, glue and other components into a stud cavity, insulating it and sealing any possible places where air infiltration might otherwise take place. This is an addition to the St. Paul's Lutheran School, Nokomis.

Co-op now 'shutting the door'

If you want your home to be comfortable and affordable to heat and cool, you have to "Shut the cotton pickin' door!" We hope to be able to help you do that, through our involvement with RyeNovators, Inc.

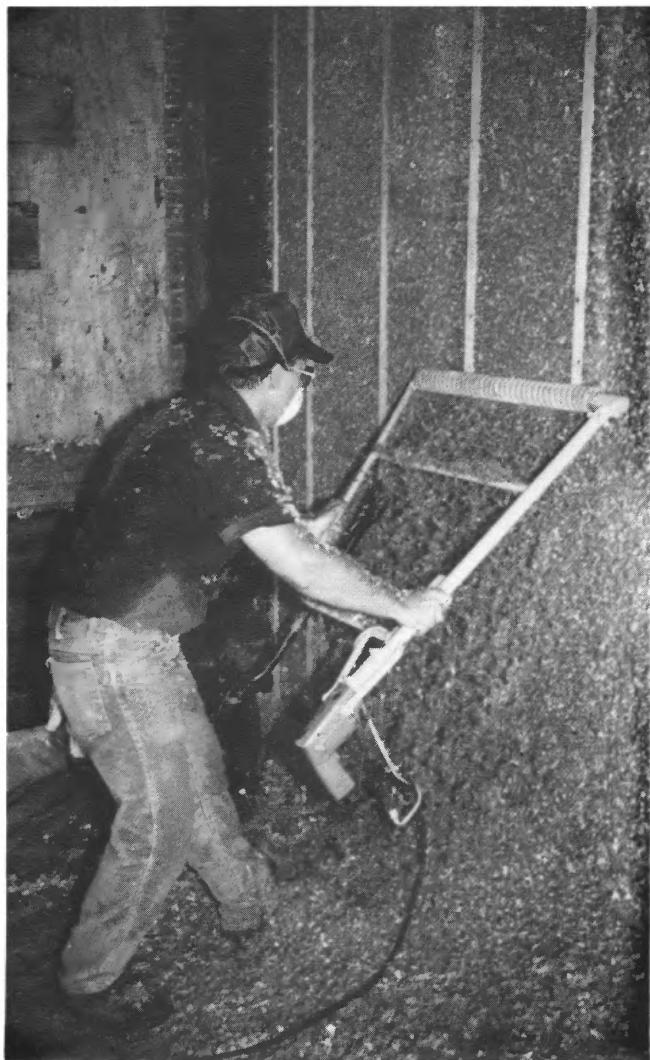
Shelby Electric Cooperative and Macari Plumbing and Heating, Shelbyville, are involved in a joint venture to RyeNovate homes in our area, to make them more affordable to heat and cool. Randy Macari and Doug Hall, field engineer for Shelby Electric, have begun the certification process to become certified RyeNovators. This is necessary

because this is not just another cellulose installation business, and special training is needed.

The Shelby Electric Cooperative Board of Directors voted recently to get into the insulation business because they believed that this process is a good one, and that it will fit into the co-op's efforts to help members make their homes more comfortable and affordable, while increasing our off-peak kilowatt-hour sales. In our relationship with Macari, the co-op has purchased the installation equipment, buys the insulation, and handles the billing and other paperwork. Macari provides

labor and expertise.

A few months ago, we reported that there was an energy conservation business that we were excited about, and that we hoped you'd find it interesting, too. In our May, 1993 center section of the REN, we noted that we'd hosted an open



Macari employee John Kneareem cleans up the insulation to make a smooth surface that still fills up the cavity. The machine employs a soft rotary bristle brush that's powered by an electric drill. Glue prevents settling, a problem that plagued cellulose insulation for years.

house for those who wanted to see the RyeNovation process first hand.

Essentially, RyeNovation is a fairly simple process, but there's more to it than simply blowing in dry cellulose. It was developed by Doug Rye, a Mabelville, Arkansas, licensed architect. Rye, who gives presentations on his process, notes that most homes have an open door in them that makes them both uncomfortable and expensive to heat and cool. "You've got to shut that cotton' pickin' door, if you're going to have a comfortable house and low energy bills," he emphasizes.

The door in question is not your usual entryway, he adds, but it might as well be. Instead, it's the many little nooks and crannies that let air infiltrate in and out of the house. "The average house, even one that's fairly well-built and not all that old, has a lot of openings that work against your heating and cooling system," Rye says.

Rye notes that you can get by with a small amount of insulation, if you have a tight house. "It's not the lack of insulation that gets you," he emphasizes, "it's the infiltration. If you're in a jetliner at 30,000 feet, you have an outside temperature of -40 degrees, and a wind-chill factor of -300 degrees, and the fuselage wall of the airplane is only a couple of inches thick. They keep it from being cold by preventing air infiltration, more than by adding insulation. That works for a house, too."

With that in mind, he came up with the idea of blowing in a wet mixture of cellulose and glue, and other components, to insulate and seal all those little holes that permit infiltration — and add up to the equivalent of an open door. The other components make the material flame retardant and repel pests.

Rye got the idea to look for a better infiltration-fighting material when he saw a workman putting up unfaced fiberglass insulation in an interior wall. "He was plainly visible through the batting," he says, "and I knew it couldn't prevent much air movement."

If there is a disadvantage to the RyeNovation process, it is that the initial cost is somewhat higher, but that is offset partly by the fact that a bad job of installing cellulose is far better than a good job of installing mineral wool or fiberglass. And there won't be a bad job of installing cellulose, with the training Hall and Macari have had.

With the better sealing against infiltration, there's no need for a house wrap, which is expensive and largely unproductive.

A major advantage to RyeNovation is a simple one: With your house well sealed against infiltration and well-insulated, you can use smaller heating and cooling units, which are less expensive to buy. And it'll cost less to run them, too.

"Properly sized," Rye adds, "such units should run longer — at less cost — and not cycle on and off as often, which is better for them. Your units will last longer."

As you can see, we are excited about the concept of RyeNovation, and we're absolutely convinced that a combination of RyeNovation and our Geothermal units — along with our dual-fuel rate — will enable you to enjoy a better comfort level while saving a substantial amount of money on your heating and cooling bills.

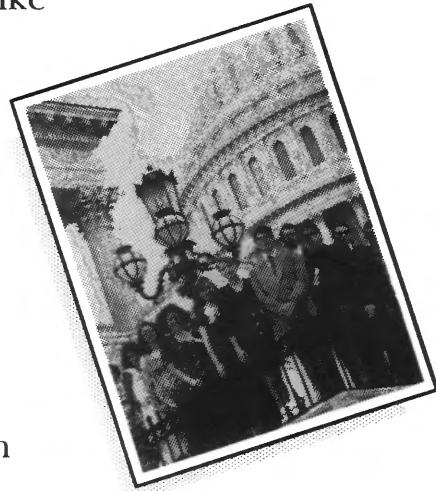
Call or stop by, if you would like more information. We think you'll be glad you did!

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Getting the job done
TOGETHER
Electric Cooperatives of Illinois

Youths of Distinction. They are young men and women from across Illinois who have shown outstanding qualities at school and

in their communities. Each year, a new group of high school students earns the opportunity to visit the seats of government in Springfield and Washington, D.C. They are sponsored by their local electric cooperative with the help of teachers and neighbors. Along with the tired feet they always get after miles of sightseeing, these students return home with some first-hand lessons about our government and its history. They meet their representatives in the capitals, and they see the importance of their own responsibilities as citizens. These young people have the chance to meet 1,200 others like them who come from all across the United States. They come home with a lot of snapshots, but they get a lot of experience, too. That's why the cooperatives sponsor Rural Electric Youth events. The inspiration and understanding that young people get today prepares them to be problem solvers tomorrow.



Electric Cooperatives of Illinois

Good for ALL Illinois

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Getting the job done **TOGETHER**

Electric Cooperatives of Illinois

People in rural Illinois do a lot of things very well. They grow a good crop, bake a great pie, and design a dandy computer program, to name just a few. One thing they're especially good at is cooperating. Rural people formed electric cooperatives to improve their own lives and enjoy the conveniences that townspeople had. During the Flood of 1993, we've seen over and over how all kinds of people with different backgrounds and different interests have united for a common goal — to help each other. They are cooperating. The Electric Cooperatives of Illinois have been there, too, because they are members of the communities they serve. Aside from the effort they put into restoring electric service as quickly and safely as possible to stricken areas, the cooperatives have joined other groups and individuals who went the extra mile to help. Employees, vehicles and equipment went in to battle the flood waters and help the victims. Many members of the cooperatives were also on the scene as volunteers. It's not surprising. Cooperating is just one of our natural talents around here.



Electric Cooperatives of Illinois

Good for ALL Illinois



Shelby Electric News

SHELBY ELECTRIC COOPERATIVE

217-774-3986

SHELBYVILLE, ILLINOIS



Vendors set up displays on the grounds at Eagle Creek displaying a variety of bowhunting equipment.

State Parks host 1993 IBO World Championship

The drive into Eagle Creek State Park was lined with cars, trucks, campers, and vans. License plates sported "IBO," "I BOW," "ARCHERY," "ARCHER"; and these plates were from what appeared to be every state in the Union. The reason for this magnificent congregation was the 1993 International Bowhunters World Championship.

President of the International Bowhunters Organization (IBO), Ken Watkins of Vermilion, Ohio, explained that "the organization was formed in 1984 in an effort to support bow hunters and foster the sport of bow hunting." To date, they

have approximately 30,000 members. "Just three years ago, the first world shoot was held in Michigan. There were less than 700 shooters at that event. This year, we expect approximately 4,000 shooters."

All of the bow shooters at the world shoot earned their right to compete in the championship. Don Novak of Decatur is the president of the Prairie-land Archery Club of Decatur, the host organization. Novak explained that all shooters have to qualify in the top 20 at an IBO sanctioned shoot. Many competed in one or more of the Triple Crown shoots: the first leg was held in McCain,



Don Novak, president of the Prairieland Archery Club of Decatur and Ken Watkins, President of the International Bowhunters Organization, discuss plans for the weekend events

Pennsylvania, in the middle of May, the second was held in June at Bedford, Indiana, and the third leg was held July 9 in Nelsonville, Ohio.

Gathered in all areas of Eagle Creek and Wolf Creek State Parks were groups of men, women, and children—all armed with bow hunting equipment. Not just a male contest, Mr. Novak noted that the World Championship listed 17 classes. "Among those 17 classes, we have women, pee wee (age 8 and under), cubs (age 8-12), youth unaided (13-17), youth release (13-17), professional and traditional longbow shooters." The groups are set up by sex, age of shooter, and classification of equipment used.

An uninformed stereotype of an archery shoot would be men standing and aiming bow and arrow at a bullseye target. A far cry from the events at the IBO World Championship. Courses were set out in the wooded areas of the state parks. They were marked as sites and lined with bright orange tape to identify the course. The targets are three-dimensional. Lifelike and exact replicas of bear, deer, wild turkey, and antelope are stationed throughout the course. When the hunter comes up on the target, he must place his foot on or by



Spectators and shooters line up at the practice range at Eagle Creek.



The main topic of conversation around the state Parks—archery and equipment. Everyone there had a lot in common.

a shooting stake. From that time, he has two minutes to fire at the target. Distance from the shooting stake to the target is not marked; and the scoring areas on the targets are not visible to the shooters. Scoring is based on the area the arrow lodges, such as heart or lung area. Shooters keep a score card for each other through the course and submit the final score at the end of the courses. Officials are stationed throughout the course areas.

The winner of this year's professional reserve class, Burley Hall of Kendalville, Indiana, shot a perfect score of 200 to capture that title. Kim Zehr of Eckerty, Indiana, also shot a perfect 200 to win her class.

Organizers of the event and state park personnel estimated (with the aid of car counters) that the World Shoot drew 54,816 visitors and competitors to the parks. All agreed that it was the largest group function ever held at Eagle Creek and Wolf Creek. An invitation has been extended to the IBO to bring their World Shoot back to Lake Shelbyville any time. State park personnel have promised to find more parking space next time for all those vehicles!



Common-sense health tips can ease harvest-time stress

Harvest time is one of the most dangerous times of the year for one of the country's most dangerous occupations — farming.

"Increased pressure to get crops out of the fields may cause additional stress to farmers and increase the risk for injuries caused by carelessness," says Paul Gunderson, a safety specialist at the National Farm Medicine Center.

American farmers have to cope with more stress than an average worker, according to the National Safety Council. Droughts, floods, pests, long hours, money problems and other complications can lead to frustration for farmers and their families and contribute to agriculture-related work accidents and illness. In 1991, U.S. farmers suffered 1,400 deaths and 140,000 disabling injuries, according to the Council. These statistics place farming among the three most

dangerous occupations.

Here are some tips from the National Farm Medicine Center and National Safety Council that may help ward off unnecessary problems:

- Acknowledge that stress exists in your life. That's your first line of defense.
- Don't minimize your reactions to stress. Buried stress can cause problems.
- Discuss problems with family, friends, clergy or a professional counselor to help reduce anxiety.
- Eat a well-balanced diet and limit caffeine, alcohol and tobacco.
- Get enough sleep.
- Keep machinery in good condition to reduce breakdown that can result in stressful days.

—Rural Electric News Service

Bright lights make SAD people happier

When the reds, yellows and oranges of fall come upon us, about 10 percent of the population gets the blues.

The moodiness and depression that set in with the first signs of winter now have a name — seasonal affective disorder, or SAD.

And one of the ways people are fighting this malady is by sitting in front of a bright light radiating from a box about the size of a microwave oven.

Doctors, clinics, laboratories and universities around the world are investing millions of dollars each year to investigate the effect light has on our health, our productivity and our sense of well-being.

What researchers have found may make a profound difference in the way we live, work and travel in the future.

SAD research, which has been going on for about a decade, indicates that millions of people may suffer from severe depression, crying spells, feelings of guilt and helplessness, cravings for sweets and junk food, listlessness, and even suicidal behavior between September and March, when nights are long.

SAD usually shows up after age 21. About 85 percent of the documented cases involve women. There are more recorded cases in the North than in the South.

New, preliminary research suggests that the retinas of SAD sufferers are usually sensitive to light during the winter, when there is less light available during the day. Some theories on the cause of SAD suggest a problem with the body's internal rhythms, and the retina is part of a direct nerve pathway to the part of the brain suspected of

containing the body's clock, according to Dr. Raymond Lam, who presented the research at a meeting of the American Psychiatric Association.

It is this suspected relation to the body clock that could make SAD research important for everyone, even non-sufferers.

One treatment for SAD is light therapy, which was first introduced by Dr. Normal Rosenthal, a psychiatrist with the National Institute of Mental Health. Patients are instructed to sit for between 30 minutes and three hours every morning and evening in front of a metal box containing bright, full-spectrum artificial light. They engage in some kind of activity — such as sewing or reading — and glance into the light periodically.

Many patients report a vast improvement in their moods after using the lights. That is prompting researchers to come up with new ways of incorporating the energizing power of light into our lives.

University scientists and private industry are in the process of developing architec-

tural lighting and portable lamps that could one day make light therapy available in homes, offices, restaurants and hotel rooms. Some claim that light therapy helps workers on the night shift sleep better during the day and perform better at night. Some who travel have used the lights to help reduce the sleepiness induced by jet lag.

There is growing evidence that exposure to certain intensities of light at specific times of day and for particular durations can cure some kinds of insomnia and improve health.

Dr. Wayne London, a psychiatrist who researches the effects of artificial living conditions, contends there is evidence of a relationship between light and some cancers, premenstrual syndrome and sick days in schoolchildren. He cites "circumstantial" evidence that light may even affect Alzheimer's disease, alcoholism, multiple sclerosis and possibly even fertility.

Researchers such as George Brinard, a neuroscientist at Thomas Jefferson University in Philadelphia, foresee light therapy that will be incorporated into building design in much the way we use indoor heating and air conditioning today.

Indeed, the light boxes now available — which range in size from portable ones that may sit on a desktop to bulkier models about the size of a refrigerator — can reportedly be intrusive and cumbersome to use, but that may be changing.

One new invention looks like an ordinary lamp but can be programmed by a microprocessor to reproduce the intensity of a mid-summer Hawaiian sunrise. That, researchers say, could pro-

(Continued on page 12d)





Shelby Electric News

SHELBY ELECTRIC COOPERATIVE

217-774-3986

SHELBYVILLE, ILLINOIS

Programs for you

We are frequently asked questions here at the Shelby Electric office. We thought this might be a good time to address some of the most frequently asked questions:

About satellite television

Q. I've heard about your "small dish" television programming. Is it as good as it sounds?

- A. We certainly think so. DBS is satellite television service brought to your home by an 18-inch fixed dish from one satellite.

Q. Isn't this pretty new? What kind of programming can we expect?

- A. We currently have a fine lineup of programmers — with more signing all the time. Some of your favorites that will be in the basic package are: TNN (The Nashville Network), WTBS, CNN, The Disney Channel (Yes, Disney in basic), USA, The Family Channel — in all, about 20 channels in basic.

Q. How about cost?

- A. The entire system, which includes dish, receiver, and remote control, will be \$700. Monthly basic programming will be less than \$15 per month. Of course, there will be approximately 150 channels in all to choose from. The prices of premium channels will be very reasonable, too.

Q. What about this deposit I hear about?

- A. We are now accepting a \$35 deposit. With your deposit, you are issued a number. This assures you that when that system is delivered to us, it is yours. No one will be able to "take cuts in line." To date, more than 200 have made a deposit on DBS systems. Of course, if you change your mind, the deposit is totally refundable. When your system is delivered, you may apply the deposit to your system or your monthly billing. And the billing will not be included — or added on to your electric bill. It is a totally separate bill and may be paid by mail.

Q. I have a big dish — what about me? Is my system obsolete?

- A. Not at all. We still have a full line of programming for big dish owners. We are assured that this programming will be available for a very long time. In order for us to provide you with programming for your big dish, you must also have a decoder (descrambler) or IRD.



About water heaters

Q. Is the Co-op's water heater program still ongoing?

- A. Yes, we are still proceeding with our water heater replacement program. If your existing water heater is bad, we will replace it with a new electric, 50-gallon water heater. If you are presently using a gas water heater, we will replace it with a new electric unit. If you are building a new house, we will give you a new electric water heater to install. Unfortunately, we do not have the personnel to install units for our members. They may be picked up at our office.

Q. What's the catch? You're giving something for nothing!

- A. We ask only that you sign a form that will allow us to install a load control switch on the water heater. Our load management program is in its early stages, and we must get switches installed.

Q. What if my electric water heater is in good shape? Don't you want to control it?

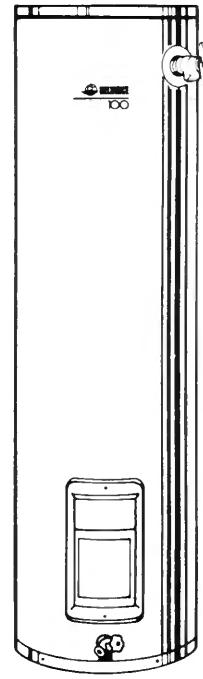
- A. Yes, we do indeed. If you call our office, we will arrange to have a switch installed on your unit. In exchange, we will replace your unit when it goes out.

Q. What about these switches? What's involved, and is it an inconvenience to me?

- A. Our personnel can install the switch in a short amount of time. It will be radio controlled. We will use the switch only when a peak alert is called to our office. Perhaps you heard radio announcements this summer asking our members to voluntarily cut back their usage during certain hours of the day. Shelby Electric's power bill is based on our peak demand to the system. Our power supplier, Soyland Power Cooperative, will notify us when we are reaching a new peak. It is in our best interest — and of course, in the best interest of you, the member — to curtail as much demand as possible. This keeps our power bill down — and helps keep the member's power bill down, also. Shutting down water heaters a few, brief times is one way our load management system will help lower costs.

Q. How long would you have my water heater off?

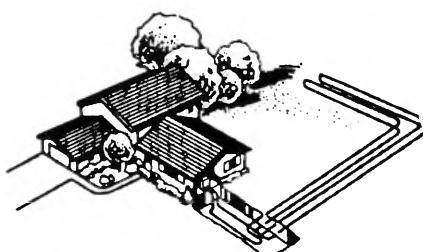
- A. For only a few hours. Definitely no longer than necessary. If you have an adequate heating and storage unit, you should not be greatly inconvenienced.



About geothermal heating and cooling

Q. I have read about some special incentives to install a geothermal system. What is available to me?

- A. Soyland Power Cooperative is presently offering a rebate of \$500 per system installed. The system must be installed to a residence being served by Shelby Electric before November 30, 1993. It must be inspected by one of our employees and certified to be rated ARI 320 or 330.



Q. Does my cooperative offer any incentives to install System:GT?

- A. Yes, Shelby Electric is currently offering a rebate of \$300 per ton installed to our members. We also offer a very attractive geothermal rate to our members.

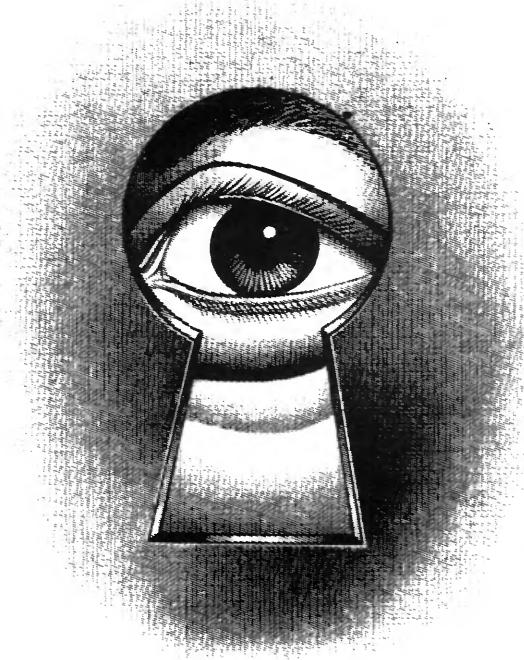
Q. How do I find out more about geothermal heating, cooling and water heating?

- A. Call any authorized dealer or check with the Cooperative Engineering Department for a referral to a dealer near you.

Q. What if I have more questions?

- A. By all means, call our office toll free at 1-800-677-2612. We'll have personnel on hand to answer your questions. If we don't have the answer at that moment, we'll find out the information you need and pass it on to you immediately!

On the outside looking in.



Some electric utility customers are bound to feel that way. The office is in a faraway city, unexplained policies are enforced, and your only contact with them is your monthly bill. It's not the "cooperative way" of doing business. An electric cooperative is something special. It's an organization providing a service to its owners. And the owners are you. That's why your participation is so vital to its continuing success. That's why your attendance at the Annual Meeting is so important. It's the leadership you elect from among your neighbors — the board of directors — that guides the operation of the cooperative and sets the kind of policy that puts people first. Local ownership, local control, not-for-profit operation...We think it's the best way to serve you, the cooperative way.



Electric Cooperatives of Illinois

Good for ALL Illinois

(Continued from page 12a)
vide a refreshing awakening for an apartment dweller in Manhattan in February. There are also glasses and hats designed to provide the necessary light to the eyes.

Rosenthal surmises that SAD could be an evolutionary hold-

over from prehistoric days when cave dwellers needed to bulk up and slow down to survive the winter.

But now other researchers are finding evidence of a reverse SAD syndrome. They have discovered that some depression is triggered in summer for some

people. This new information, combined with all that is known about winter depression, is adding tantalizing hints that climate and the seasons may affect human behavior and the mental state more than modern science ever knew.

—Rural Electric News Service

Lighting the Christmas tree: From glass eggs to bubble bulbs

Some fascinating firsts are lost in the mists of history, but believe it or not we know who had the first electrically lighted Christmas tree.

The man who illuminated Christmas was one Edward H. Johnson, a vice-president of Thomas Edison's newly formed Edison Electric Company. It was Christmas 1882, just three years after Edison unveiled his new electric light bulb.

Johnson didn't seek publicity for his electric Christmas tree, but a reporter for the now-defunct Detroit Post and Tribune spied the tree in Johnson's New York City home.

He wrote: "There at the rear of the beautiful parlors was a large Christmas tree presenting a most picturesque and uncanny aspect. It was brilliantly lighted with many colored globes about as large as an English walnut and was turning some six times a minute on a little pine box. There were 80 lights in all encased in these dainty glass eggs, and about equally divided between white, red and blue. As the tree turned, the colors alternated, all the lamps going out and being relit at every revolution. The rest was a continuous twinkling of dancing colors, red, white, blue, white, red, blue, all evening."

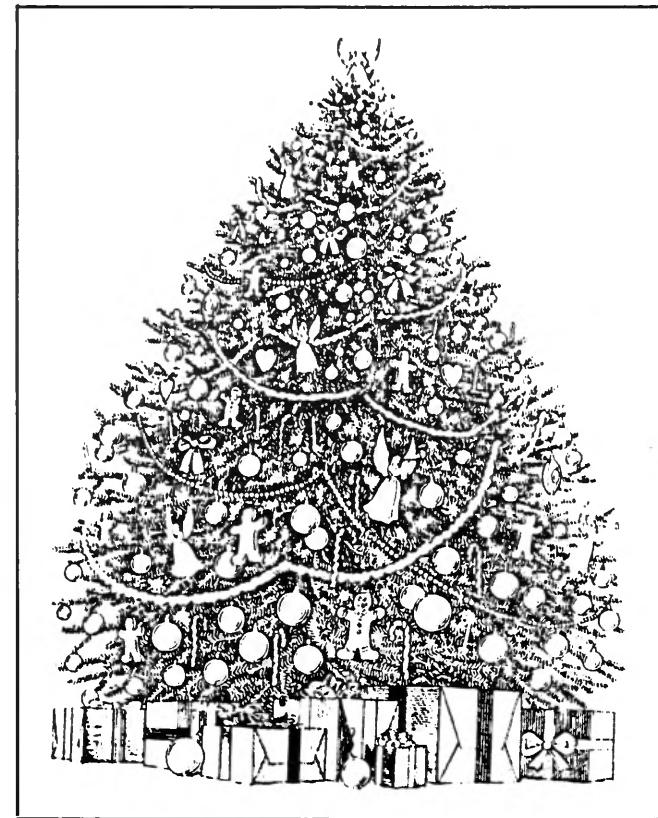
The electric tree was a sensation among the monied class at the turn of the century, according to Phillip Snyder, who researched the history of the Christmas tree for a book called "The Christmas Tree Book."

Within a few years, the wealthy were sparing no expense to construct the grandest, most brilliantly illuminated trees that 1890s technology allowed.

Christmas tree parties became big social events. In 1895, President Grover Cleveland put electric lights on his White House Christmas tree. A few years earlier, the New York Hospital put an electric tree in its children's ward.

"It was so arranged as to revolve slowly, and as it moved electric lights shone from each of its boughs. The children, many of whom had never seen anything half so fine, shouted with delight," wrote a New York Times reporter who visited the hospital to see the tree — still a novelty in 1891.

But it didn't take long for the trees to spark controversy. A few years after it had waxed euphoric over the hospital tree, the New York Times was concerned that the whole electric Christmas tree idea was getting out hand.



"The little children of the rich have grown critical with overabundance, and nothing short of an electric tree, with fairy effects . . . satisfies them," an editorialist wrote. In those days the lights, and the electricity to run them through a Christmas season, could cost \$2,000.

The early electric trees were customized in every sense of the word. Each bulb was hand-wired. Individual bulbs were bought or even rented for the season. Wiring a tree required hiring a skilled electrician.

In 1903, the Ever-Ready Company of New York began manufacturing ready-made strings of electric lights. An "outfit," as they were called, contained 28 sockets with General Electric (GE) bulbs, and cost \$12, about what a laborer earned in a week.

Throughout the early decades of the century, the primary unit of the electric tree, the bulb, was being refined. The original Christmas tree bulbs were tiny replicas of the classic lightbulb.

In about 1910, GE went to a ball-shaped bulb,

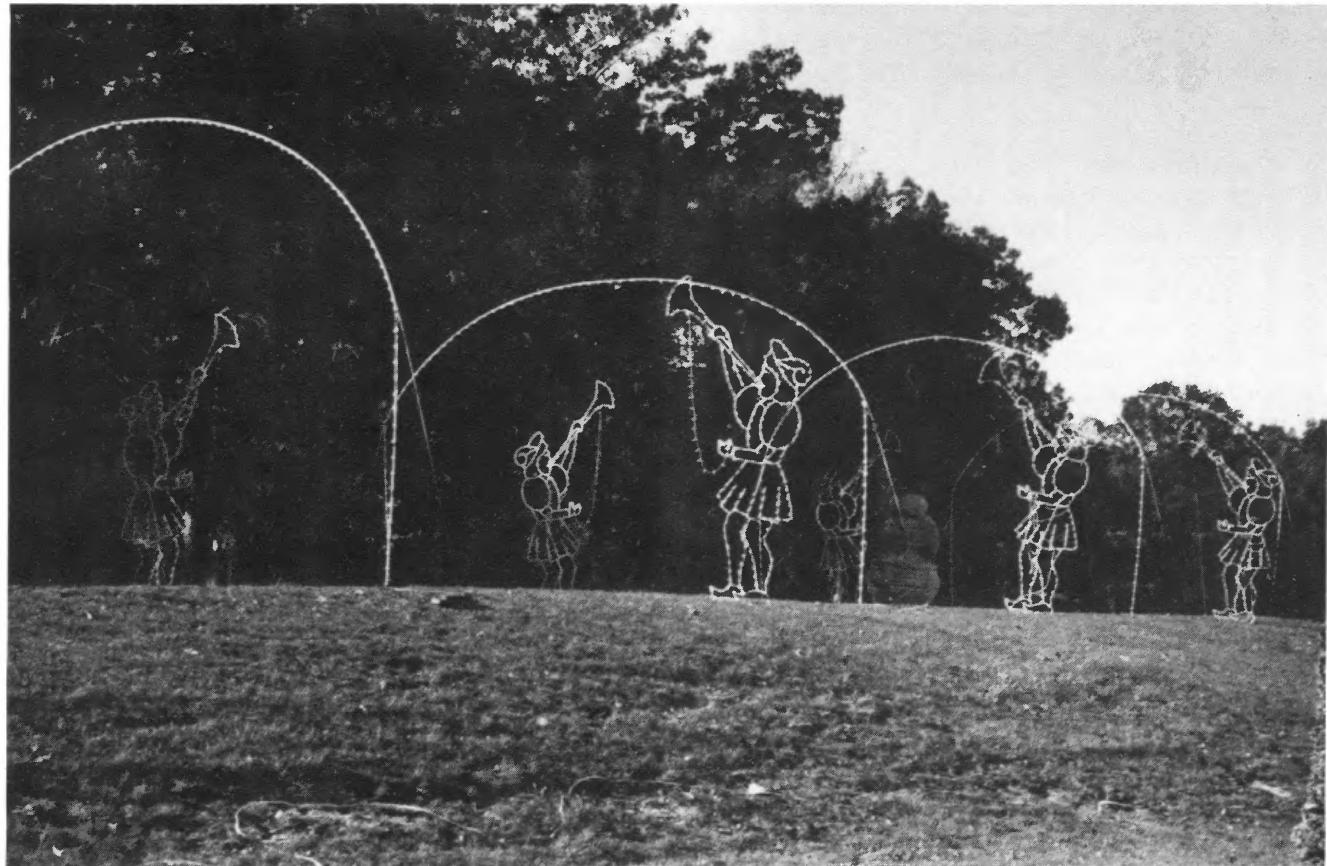
(Continued on page 12d)



SHELBY ELECTRIC COOPERATIVE

217-774-3986

SHELBYVILLE, ILLINOIS



An archway of trumpeters spans the three mile drive through Eagle Creek State Park. Some 210,000 visitors made the drive last year.

Let the starflakes guide

Did you visit the Festival of Lights last year? I'll bet you loved it! Some folks say once you've seen it, there is no need to return. Well, that's not exactly correct. Suzi Walden, Festival of Lights director, says things are always changing with the Festival.

"I had three goals when I accepted this position: Number one — I wanted to expand the Starflake Trail, Number two — I wanted to get sound into the park at Eagle Creek, and thirdly, I wanted to light the bridge!"

The bridge Walden refers to is the Bruce-Findlay blacktop bridge spanning Lake Shelbyville.

Located just east of Findlay, this bridge is the longest in Illinois — and the longest bridge of its type in the United States. With a length of 3,150 feet, the lighting job required approximately 6,500 clear lights. It will be accented with two of the famous starflakes at each end of the bridge. What a beautiful centerpiece for the Starflake Trail.

In 1993, the Starflake Trail included the Inn at Eagle Creek and the communities of Findlay, Shelbyville, and Sullivan. This year, Arcola, Arthur, and Mattoon have joined the trail. These communities decorate with the starflakes as a theme. Within the community, Christmas lights



On Thursday nights, 20 percent of the gate receipts is donated to charity. Ten percent to the Foster Parent Program and 10 percent to the Shriners Childrens Charities. Here, Fred Doerner (left) president of the Shelby County Shrine Club and Morris Tice, president of the Ansar Safety Patrol, express their appreciation to Suzi Walden, director of the Festival of Lights.



Santa and Mrs. Claus were on hand to visit with some of the 1,500 foster children and their parents who were feted at the event.

our way

and displays abound. Not only do the businesses decorate, but individual homeowners take great pride in their own personal lighting displays.

When you follow the starflake trail, be sure to allow yourself plenty of time to drive around and take in the beauty of all the decorations. The starflake is lit up officially on November 12 and runs through January 26. Walden reminds us to watch for signs and watch for the starflakes that adorn the trail. Installed on many utility poles, they add extra sparkle to the dark winter nights.

Of course, headquarters for the Festival of

Lights has always been Eagle Creek State Park and the Inn at Eagle Creek. Starting with the lighting ceremony on October 30, the Inn is buzzing with activity through January 31.

Every year, a party is given in honor of the area's foster parents and foster children. This year, the foster children were chosen to throw the switch lighting the park and opening the Festival of Lights' season. Approximately 1,500 children and their foster parents were treated to meals, swimming, and entertainment concluding with a night's stay at the Inn, Shelby Historic House and Inn, Spillway Motel, or the Gateway Inn in Sullivan.

When the switch was thrown, 437 lighted displays sprang to life. Utilizing over 800,000 colored bulbs, displays are grouped in categories: Winter Wonderland features snowmen, skiers, and sledders, Winter Carnival is indeed a carnival featuring a carousel, ferris wheel, and fun house, the Victorian Village features houses and businesses and honors Shelbyville's holiday theme, a Victorian Christmas. The Spirit of Christmas features a beautiful archway of angels, Christmas trees, and much more. Toyland is a delight of toy soldiers, giant Christmas packages, and a gigantic jack-in-the-box. Children and adults are thrilled by the Victorian Park which is guarded by a giant green dragon. Featured in this park are swans swimming on a lake and a colorful peacock. With all this sparkling lighted beauty, the new sound system will fill the air with the sounds of the season. Eighteen speakers will spread Christmas music throughout the park — so one must drive slowly to appreciate all the sights and sounds of the holidays!

Walden notes that the festival and Starflake Trail are sponsored by the Lake Shelbyville Visitors' Association (LSVA). "The Festival of Lights is a non-profit organization, and is a part of the LSVA; it is in no way connected with the Inn at Eagle Creek," she says. The Festival in Eagle Creek State Park is open nightly between October 31 and January 31, 1994, from dusk to 9 p.m. Fees are charged to help defray costs of lighting, power, equipment, etc. From Sunday through Thursday fees are \$5 per car. And Friday and Saturday fees are \$8 per car. Buses are charged \$1 per person. If you have any questions, you can call Walden at the Inn, 756-3456 or the Lake Shelbyville Visitors' Association at 1-800-874-3529. They will be glad to answer your questions or help you plan your trip along the Starflake Trail.

With the completion of Walden's three goals for 1994 (bridge lights, sound system, expansion of the trail), I have no doubt you won't be sorry you visited for the first time this year, or returned to the Festival in 1994!

One word
makes the difference.
It brightens the room
when you walk into it, and lightens
the load when you have a problem that's
bigger than you are. It describes that human
tendency to help a neighbor or a stranger. It makes
life a lot easier in the countryside, and it continues to
work — creating jobs, providing drinkable water, helping
teachers in their classrooms and entertaining families in their
homes. It's a proven success story. One word makes a difference.

Cooperation.



Electric Cooperatives of Illinois

Good for ALL Illinois

(Continued from page 12a)

which was colored with translucent paint.

In the early days of the century, there was much more variety in tree lights. Each light was considered a separate work of art — with bulbs shaped like strawberries, clowns, snowmen, roses and Santa Claus. By the end of World War II, however, such detail seemed quaint.

The 1950s saw a brief vogue of bubble lights, the long narrow bulbs with colored liquid inside that bubbled at the temperature of an average

light bulb. For a time, no tree was without its string of bubbling lights.

By the 1960s, the bubble light was almost gone from the American landscape, a victim of oversaturation.

In the 1970s the new star of Christmas tree lights was the midget bulb — a tiny twinkling light that gave a fresh look to the Christmas tree. The softer, more pastel colors could be clustered closer together for an effect like the nighttime sky.

—Rural Electric News Service