

Live Streaming of Agriculture Market Statistics to the Remote Village Areas Using Amateur Radio

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Abstract:- Amateur radio is a hobby that encompasses the whole range of communications technology. It has existed since the time Marconi, Hertz and others began their experiments. It is the only hobby that is regulated by the government of every country in the world. To obtain their operating licenses, amateurs are required to pass a written examination in radio regulations and fundamentals of radio technology. More than a 1.5 million persons worldwide are licensed amateurs. Now, after 100 years, amateur radio is at a critical turning point.

In this project we are going to implement the concept how ham is useful for farmers who are located in remote areas where other networks may not be reachable. HAM is used to give information like live updates about price of their agriculture yields in their local and near market places or state or national wide price and also giving instructions to them about other agriculture related queries. Hence appropriate decision can be taken at the field itself. The intent is to develop a two way communication to the farmers located in remote areas using HAM radio based transceiver that transmits and receives signals.

Keywords:- Trans receiver, mic, antenna.

I. INTRODUCTION

In the present technology world we have various different type of updated and updating technologies in communication network. But most of the government relies on HAM RADIO during disasters time. It is not only used for disaster communication but also it used in space station communication and played one of the main key role for communication during world war 1.

In the present days even we may have different communication technologies but all this are not available even at present to most of the people located in remote

area. Where most of there livelihood/occupation is agriculture they relies on farming.

But they don't know the present market statistics and what all measure they can take for agriculture growth. Not only that even if any disasters or sever health issues occur in remote areas most of outer world don't know what happens in remote areas and not possible to provide help for them. In this cases by Setting up a HAM radio station to the people in remote areas it is help for them like.

It can be used to assess the needs and gaps in early warning and communications for disaster situations.

It can be used to explore the possibilities for transmitting the live agriculture base price from the market yard to the Remote Areas where internet and mobile networks will not work.

Remote villagers can communicate to the agriculture R&D institutions to share/receive the information about newly implementing methods.

Since HAM operates by authorized person (HAM Licensed Holder).Hence information is more authenticated. Here communication happens through a using battery-operated/12v power supply transceiver.

II. RELATED WORK

There are various kind of antenna's in which inverted vie antenna and horizontal dipole are similar which are bent towards ground creating an angle 120 or 90 degree between dipole legs with the reason that it can reduce ground foot print of antenna with out any impact on performance it is widely used in areas of limited space.

P. R. Kam, H. E. Price, R. J. Diersing, "Packet radio in the amateur service", IEEE J. Select. Areas Common., vol. SAC-3, pp. 431-439, May 1985.several activities are

trials were made in improvement of networking hardware & software for computers with the help of amateur radio community has been equally in active.

This article help us to provide history of hardware , software& protocol development activities in the process of describing amateur packet radio operations they include AMSAT-OSCAR-10 and UoSAT-OSCAR-11, which are currently operating in orbit, and PACSAT, JAS-1, and Phase 3-C, in the design and construction phases.it was in 1930 to head the physics department Dickinson College hired Dr. W.A. Parlin. He started a radio station at Dickinson the first amateur radio station had the call sign of W3YC.the station was successfully launched at Dickinson.

R.J. Diersing, G. Jones, "Low-Earth-orbit store-and-forward satellites in the amateur radio service", Telesystems Conference 1992. NTC-92. National, pp. 8/7-814, 1992.Electromagnetic field theory was presented by James Clerk Maxwell in 1873.with the help of high power & gaint antennas Guglielmo Marconi in 1901 communicated across the Atlantic with a radio device. In 1921 began Transatlantic transmitting and receiving Tests were made. By July 1960 first two-way contact via the moon took place.

III. METHODOLOGY

The Ameture radio is used in Disaster condition so that we can communicate to different persons so that we can help, that is the main reason to invent the ameture radio in this Continuous wave modulation technique(modulation means process of transforming a baseband signal to another signal, the demodulation is the process of recovering the baseband signal) is used in VHF/HF Frequency Range, Inverted V Antenna(is similar to horizontal dipole but with two side ground bent it will create a 120 or 90 degree angle between the dipole legs) is used for transceiver purpose Arduino board is used for building a transceiver model along with an LCD(Liquid Crystal Display) which displays operating frequency of the operator so that we can see through LCD, means frequency values Tuning(connection between two anteenas will be done for appropriate operating frequency range. The transceiver is modeled in a industrial standard is used to combines both the transmitter and receiver in one module Regulated 12 volts power supply used for energizing the module.

➤ *The Basics of Amertuer Radio:*

Students who are interested in wireless technology and tinkering, ham radio is the basic electronic theory and for radio communication knowledge.

If you have amerture radio in your hands that means there is a world in your hands.

IV. WORKING

Ham radio is the basic infrastructure of the radio sprectrum. In which we can tune into any frequencies With the another ham radio equipment or by using ham radio applications in mobile. In the Ham radio there are many Basic type of communications using with different frequencies like "HF, VHF, VLF, LF etc" But in HAM radio we can use HF or VHF frequencies.Where as HAM radio refers to the short Range communication and Wide range communications.

HF is the long distance communication of hamm radio operations. Ham radio can communicate with people all over the world. HF frequency can range between 3 to 30Mhz.Whereas VHF can be used for Very high distance communication. Vhf can range between 30to 300Mhz.VHF is unaffected by atmosphere or any noise but it is affected by line of sight communication.

While the radio signals from Vhf can propagate out of space whereas HF signals can bounce off the ionosphere. This allows for non sight of communication. Hf is not affected by the earth's curvature or other obstacles like VHF. We have to use antenna to tune for frequencies. In Ham radio we are using Inverted VEE Antenna. The gain of inverted Vee antenna is similar to that of dipoleat the same elevation because most of the radiation is from the high current portion of the antenna.

By using Ham radio we can tune into any other frequencies in which we can also hear the other persons who are interacting or discussing with that same frequency. Before to tune into frequencies we have to get the license for using ham radio So that we can use Ham radio. Ham radio can also works at tough situations like disaster situations or earth quakes.

V. CONCLUSION

Amateur Radio is very helpful in emergency communication so increase in amateur radio usage will make our nation development step ahead it will work in very disaster environment condition and it is very useful for Army, experimenting with software based transmit audio processing techniques can enrich your amateur radio experience most importantly it will provide an opportunity for you to learn more about the electronics in this we can talk to asteroids, it will us more in disaster that means we can save many life if we have this we can made more friends through out the worlds so that more people we know.

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