I M P U L S E

I n t e g r a t i n g t h e N e w s o f E l e c t r o n i c s ! ! ! | Oct 2 0 18-Vol I

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
SECAB INSTITUTE OF ENGINEERING AND TECHNOLOGY, VIJAYAPURA

Department Vision

To develop professionally competent and socially responsible Electronics and Communication Engineers.

Department Mission

We, the Department of Electronics and Communication Engineering are committed to achieve our vision by:

- **Strengthening core competencies among the learners through outcome-based education.**
- **Imparting technical skills by conducting hands-on training programs/workshops on Emerging technologies.**
- **Producing graduates with societal responsibilities.**
- **To Involving stakeholders in development of the department**

HOD'S Message

The process of learning is extremely important in life. What you learn, how you learn and where you learn play a crucial role in developing ones Intellectual capability. I am pleased to welcome you to the Department of Electronics and Communication Engineering. It is the most flourishing discipline of Engineering.

It offers professional technical training that keeps the students to be in pace with the latest developments in the field of Electronics and Communication Engineering. The department trains its Technocrats to face the challenges in life by providing many value added courses to enhance their career prospects. Continuous Interaction with students, parents and staff, along with the Training and Placement Cell ensures a bright future of the students. Special attention is provided on practical orientation to the teaching learning process.

The department regularly takes various initiatives like organizing Colloquium by inviting experts from Industry and Academic background. We conduct workshops and Technical seminars for students. We do send students for Internship programs to get exposure in the working environment.

Our goal is to impart value based quality education along with development of positive attitude, skills and abilities to apply their knowledge in order to face the challenges of future. I wish success to all students in your endeavor to join us on the journey of quality education & to have a great learning experience with my excellent, loving & caring team.

Dr. Noorullah Shariff (B.Tech(ECE), M.E (Guided Missles), Ph.D(CSE))

Evolution of Telecommunication

The history of telecommunication began with use of smoke signals and drums in Asia and Africa. These Systems were used by Military camps. During 4th Century BC, Hydraulics Semaphores which worked with water filled vessels were used but were limited in range.

Later, during middle ages, Becons were commonly used at hill tops to relay the signals whose drawback was it allows only one signal bit of information to pass. In 1790s a French engineer worked on visual telegraphy which uses a pair of clock hands which is used to indicate symbols at different times.

ELECTRIC TELEGRAPH

In the early 19th century, Electrics Telegraphy was developed. In 1800, Italian Physicist Alessandro Volta Invented Battery which stores an electrics current and allowed the current to be used in a controlled environment.

In 1830s, the British Team of Cooks and Wheatstone developed a telegraph system with five magnetic needles that could be pointed around a panel of letters and numbers by using electric current. These system were used by Railroads in Britain. During this period of time, Morse in collaboration with Gale and Vail produced a single circuit telegraph which worked by pushing the operator key down to complete the circuit of the battery.

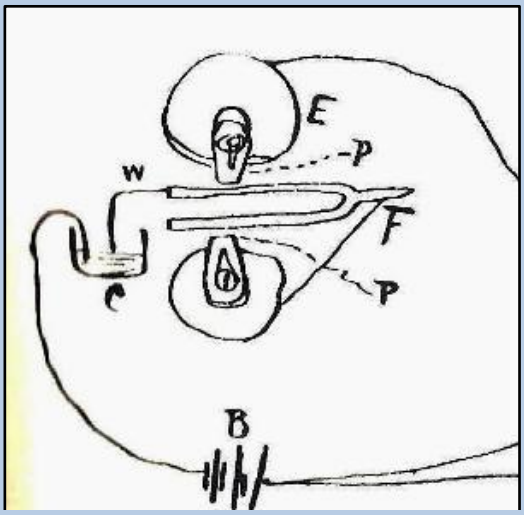
MORSE CODE AND ITS WORKING

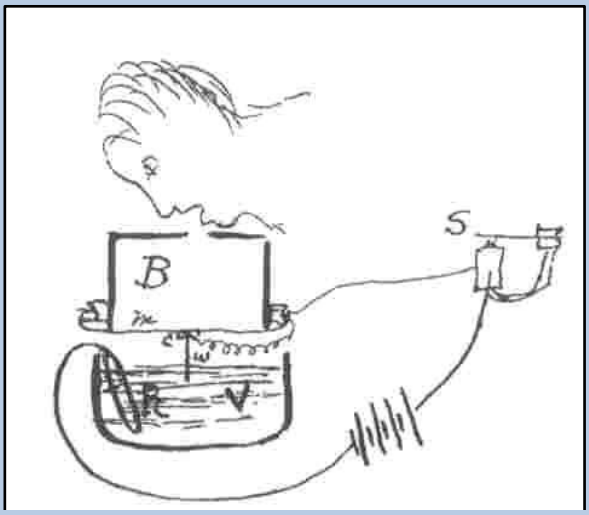
In 1830s Morse and Vail Created Morse code. The code is assigned with Dots and Dashes based on frequency of use. Letters used often were ‘E’ for simple code and letter ‘Q’ got a longer and complex code. The codes when transmitted over the telegraph system were represented as marks on a piece of paper than the telegraph operator translate into English.

HISTORY OF TELEPHONE

The Electrics Telephone was invented in 1870s by Alexander Graham Bell. He was the first person to be awarded a patent for electric telephone by United States Patent and Trademark in 1876. In 1875, Bell with the help of Thomas Watson developed a simple receiver which could turn electricity into sound.

On March 3 1876, Mr Bell started to investigate the wire vibrating in water. Bell observed that, a vibrating current carrying electrode in a conducting liquid and the vibration in current will be equivalent to the frequency and amplitude of vibration. Mr Bell Verified the concept by connecting a tuning fork, a battery and one reed receiver in series with a bowl of acidic water.





WORKING OF FIRST ELECTRIC TELEPHONE

Bell experimented the electric telephone by using reed receiver which functioned as earphone. When he held the vibrating tuning fork parallel to water, he surprised that he could hear the sound of tuning fork coming from reed receiver. Later, Bell added little acid with water and sound became more louder and also observed that the tuning fork need to be perpendicular to liquid to produce current.