Decade of Innovation at Collins Radio

THE FABULOUS FIFTIES

WELCOME

- Thank you for coming to learn about this very interesting period in the history of our company.
- History "Community of Practice" meetings intended to communicate the best practices of those who have gone before, building the foundation for our careers here.
- Today's inaugural presentation of the topic will be the crummiest, but hopefully still well worth your time. Please help us improve it for future participants





DYANMICS OF INNOVATION

- □ The personalities we discuss today, along with their peers (famous and forgotten) fed off of each other to innovate, leaving legendary technology and stories in their wake.
- They can inspire us still, and I hope that's why we're all here today.
- We should be reminded to model the best behaviors from this decade
- Resist the, "My project is doomed", Dilbert syndrome. They did.

PERSONALITIES

Preliminary list of innovative personalities at Collins Radio in the 1950s, intended to elicit audience feedback along the lines of, "You forgot so-and-so"!

- Ed Andrade
- Warren Bruene
- A. A. Collins
- Mel Doelz
- Dr. Raymond DuHamel
- Alexander Lippisch
- Dr. Dave McCoy
- Francis Moseley

- Ernie Pappenfus
- Dr. Winfield Salisbury
- Gene Senti
- John Shanklin
- Roshan Sharma
- Chandos Rypinski
- Dave Weber
- Walter Wirkler



1950S INNOVATIONS AT COLLINS RADIO

1950

- 38th Parallel Incursion transmitted to world via Collins Radios
- ARC-27 & GRC-27 accelerated

1951

EME Bounce Experiment

1952

- Mechanical Filter Introduced
- Doelz hires Sharma
- Axis Converter patent (Gerks)
- SSB Research

1953

- HSI, ADI patents granted
- 618S hits market 144 channels!

1954

- Cal. Int. Telephone becomes first Microwave Link customer
- Engineering bldg. (120) occupied
- Weems visits Feather Ridge project, praises radio sextant
- **R390A**
- Doelz awarded PolarCommunication System Patent

1950S INNOVATIONS AT COLLINS RADIO

1955

- "Transistorized" Kineplex development begins
- Gold Dust Twins Introduced
- BirdCall awarded

1956

- Kineplex testing
- Doelz files MSK Patent
- DuHamel comes from U of IL
- 9 SSB papers from Collins Engineers hit IRE pub.

1956 (cont.)

 SAC SSB flights – Gold Dust Twins and ARC-58 Prototype

1957

- Kineplex in production
- Operation Power Flight
- Big Talk
- □ KWM-1

1958

Prime for Mercury award

1959

Doelz OFDM patent awarded

HF INNOVATIONS

R390A HF RECEIVER



618S AIRBORNE HF TRANSMITTER



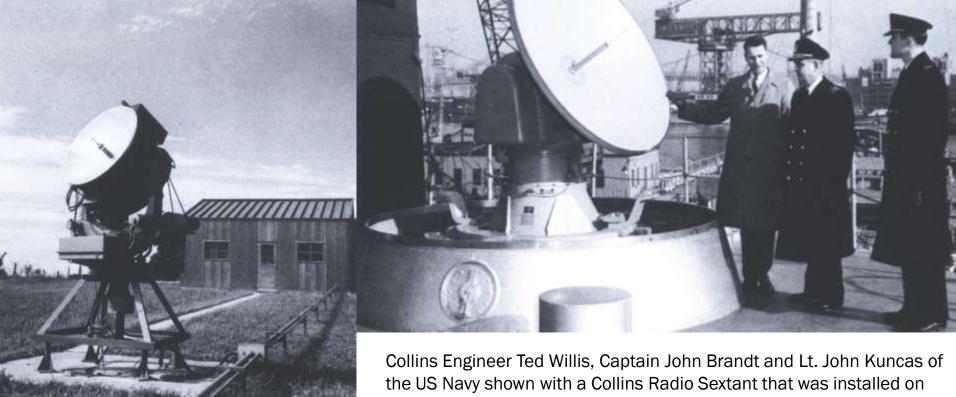


KWT-6s at Andrews AFB Ran the VIP Network

Comm. Central in Cedar Rapids aka "Liberty Station" was used in support of both the VIP network as well as the SAC network, a fact that isn't lost on conspiracy theorists.







Radio Sextant experiments were conducted at the Collins Feather Ridge Observatory, believed to be somewhere west of the quarry near Council and County Home road.

Please contact Lawrence Robinson if you know the exact location of this facility.

Collins Engineer Ted Willis, Captain John Brandt and Lt. John Kuncas of the US Navy shown with a Collins Radio Sextant that was installed on the USS Compass Island in 1959. The Optical Sextant used RF from the Sun to determine a ship's position, making it feasible to perform traditional sextant navigation positioning during daytime in *any* weather.

Time Magazine, quoting Fred Haddock, Radio Astronomer of the Naval Research Laboratory, reported: "The ship's navigator can find his position just as if he had an assistant watching the sun through an ordinary optical sextant. No cloudy weather gets in the way of the radio sextant, nor can an enemy jam the radio impulses (as is possible with other radio aids to navigation, such as Loran)."

(Photo on Picture Pays.)

A world-famed navigator declared Wednesday that the new Collins Automatic Radio Sextant has opened up "a new phase of practical celestial navigation."

That statement came from Capt. P. V. H. Weems, retired naval officer and founder of the Weems System of Navigation which is famed among seamen and airmen.

The instrument to which Capt. Weems referred is a navigation device that automatically tracks the aun and gives seamen and airmen a continuous "fix" on their positions. Information about the sextant—which was developed by Cellins Radio Company — was made public July 14.

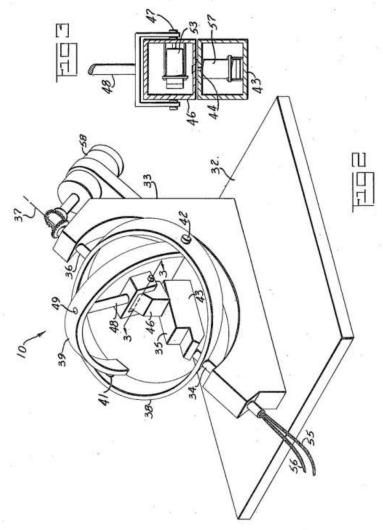
Capt. Weems' interest in the whole field of navigation brought him to Cedar Rapids to inspect the sextant at Collins Radio Company's Feather Ridge observatory, 10 miles northwest of Cedar Rapids.

After studying the sextant, the famed navigator declared: "The opportunity to inspect and test the eriginal Collins Automatic Radio Sextant has convinced me that we are entering a new and extended phase of practical celestial navigation."

Capt. Weems was president of the American Institute of Navigation in 1952. His book on air navigation won him the French Aero club's "Gold Medal award. He has been selected by the American Philosophical Society of Philadelphia to receive the Magellanic Premium for 1954, for his service to navigation.

A resident of Annapolis, Md., Capt. Weems is chairman of the board of Aeronautical Services, Inc. Filed Jan. 21, 1950

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INVENTOR
IRVIN H. GERKS
Marin Moody
ATTORNEY

Navigation Aid Utilizes Tiny Pulses

CEDAR RAPIDS, Iowa, Feb. 23. (UPI)—A newly developed radio sextant, said to be 10 times as accurate as present marine compasses, could revolutionize modern naval warfare, its designers said today.

Signers said today.

Dr. Gene Marner, head of the radio astronomy group at the Collins Radio company, said the device can track the moon and sun continuously under all weather conditions and is a "major breakthrough in navigational trystems."

Its importance, he said, lies in its ability to pick up extremely weak radio signals from the moon, whose total power is 1/500,- f. 000 billionth of the power of a sto small Christmas tree light.

a Collins research official Dr.
David McCoy said secrecyd shrouded experiments since late
le last summer at Feather Ridge
in observatory near here had
yielded the first continuous tracking of the moon in history.

re require a clear sky to obtain a stars, whereas the radio sextant can track both the moon and sun ce under all weather conditions.

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