instrumentation and the weather program¹

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The rapid increase in professional weathercasters during the last few years has produced a demand for different types of meteorological equipment. Although there has long been weather equipment on the market, few items are designed with the television weather program in mind. It is the purpose of this paper to discuss weather equipment which is readily available and can be modified to perform satisfactorily on television.

Wind equipment is a good example. Precision Weather Bureau approved dials may be customized for the TV set by adding rings to the outside to make them easier for the viewer to read. Since both wind direction and speed dials have the greatest action, they are recommended rather than other dials that appear stationary. The viewer cannot be expected to appreciate a high-price precision temperature dial when a dummy mock-up looks the same.

Radio teletype and facsimile in some cases could be provided by the interface of existing equipment at your station. These radio circuits supplement existing land line facilities at only a fraction of the operating cost of the latter. For instance, current western temperatures are received too late for air time here. Radio teletype is two hours ahead of the land line, and in some cases furnish data not available on land line. Radio is a good storm back up too.

In case of major twin-city markets a more ambitious weather project is the relay of parameters over existing TV microwave links. Weather sensors can feed telemetry equipment for relay over the microwave subcarrier to the main studios. Data voids in resort areas and remote areas of interest to industry could be served in this way.

APT satellite equipment is available as a commercial package or may be a case of adding locally engineered components to existing equipment at your station. At any rate, we find satellite pictures the most exciting adventure to date, and one which lends itself to the television industry and the weathercast. We expect modified versions thereof to be tremendously important in the next few years for those stations not wishing to invest in an entire tracking station, building block plan that may be added to and updated as funds become

available, or tie into a local Weather Bureau receiver providing one is available in your city.

Many stations would like to use weather radar on their weather programming. There are three ways this can be done:

1. Buy a weather radar.
2. Install remote facilities from WB or other existing radar.
3. Subscribe to (WB/RATTS) Weather Bureau Radar Telephone Transmission System.

Each system has its advantages and disadvantages.

In the case of the WB/RATTS system, a slow scan display is involved and updated every 2 minutes. The initial cost and maintenance is about the same as owning your own radar. This display includes interpretative information inserted at the WB which might interfere with the map overlay or information to be added at the studios.

It is hard to beat a real time display. The most economical method would be to remote display the WB radar with station facilities. The color explosion created a surplus of black and white equipment. Most stations have already phased out a videcon camera chain and a microwave link. Maintenance is simplified because the station technician is dealing with equipment with which he is already familiar. Once you have a video display of the radar indicator, additional feeds could be provided for other services such as CATV, airport lobbies and marine subscribers.

This method has the disadvantages of:

1. Requires a microwave path from the WB to your studio.
2. Slow scanning rotation on WB radar does not give the viewer sufficient time to become oriented to your map overlay. In a busy program format you need rotation of 15 rpm or more.
3. You are limited to the range and mode of operation the radar operator selects. (Always maximum.) No minimum range available.
4. Most WBO radar is 10 cm—detects clouds, and airplanes, etc., which confuse the viewers.

Owning your own radar is not out of reason. There are packaged type systems available, many of which have the disadvantage of being 3 cm. An effort needs to be

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made by an electronic firm to produce a good 5 cm radar for TV. There is currently a great scarcity of surplus units—the cost of maintenance versus age curve which we are now experiencing should be of concern in any customer owned radar. Surplus systems are available which can be modified and maintained by station personnel. The surplus system can be customized to your specific needs. Some of these even include circular as well as plane polarization.

Sector-scan can be added for the cost of a few switches and relays. Accurate and interesting overlays can be a “do it yourself” item with a little help from your photo and art departments (affix to indicator).

Lapse time film is important when your radar detecta-

ble weather doesn't occur at program time. This can be accomplished with a film camera and clock motor. Polaroid shots are easy to take and record data for future showing.

The new low-loss flexible wave guide makes it possible to get the electronics of the system in a convenient all weather location to cut maintenance costs.

During the past ten years the techniques I have discussed have been evaluated at WTVT in Tampa, Fla. All are designed to assist the television meteorologist so that he may bring new dimensions in weathercasting to the public. These and other weather equipment systems are on display at the WTVT Weather Service and are available for your inspection.

announcements

11th OSTIV Congress, June 12 to 22, 1968, Leszno, Poland

The 11th Congress of the International Scientific and Technological Gliding Organization, “OSTIV” (Organisation Scientifique et Technique Internationale du Vol à Voile), will be held at Leszno, Poland, at the site of the World Gliding Championships.

The tentative program is as follows:

June 12 (Wednesday): Official Opening.

June 13–16: Technical Sessions.

June 17, 18 (Monday, Tuesday): Excursions and Free Days.

June 19–21: Meteorological Sessions.

June 22 (Saturday): General Conference and Closing Ceremony.

For the Meteorological Sessions, papers are invited, but not restricted, to the following topics:

- 1) The Use of Satellite Information for Soaring Flight
- 2) Observations on “Cloud Ensembles”
- 3) Turbulence in Mountain Waves
- 4) Advances in Measuring Techniques
- 5) Advances in Data Analysis
- 6) Structure and Models of Thermal Convection
- 7) Reviews of Gliding Research Programs in Different Countries
- 8) Maximum Distances and Altitudes Achievable in Soaring Flight

9) Reports on Exceptional Flights

10) International Cooperation

The possibility of a joint session of the Technical and Scientific (Meteorological) Sections of the OSTIV is being considered.

All papers to be given at the coming Congress will be published in the “Swiss Aero Revue” (official organ of the OSTIV) in English, French, or German, and, subsequently, in the next OSTIV volume. The papers given during the 10th Congress in England (1965) will be available at the 11th Congress in published form as OSTIV Volumes IX and X.

Titles and abstracts of papers for the Scientific Sessions to include name, affiliation, and address of the author should be made available to: Dr. Joachim P. Kuettner, Chairman, Scientific Section of the OSTIV, 345 17th Street, Boulder, Colo. 80302, USA. Time and projection requirements (preferably 35 mm slides and 16 mm movies) should also be stated.

Excursions to Bielsko and Wroclaw are planned. The OSTIV participants will be housed in Boszkowo, outside Leszno, with free bus connection to the airfield. During the Congress the “OSTIV Plaque” (for the most important technical or scientific contribution to soaring flight) and the “OSTIV Trophy” (for the best designed Standard-Class-Sailplane) will be awarded.

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