EARTS

En Route Automated Radar Tracking System

UNISYS

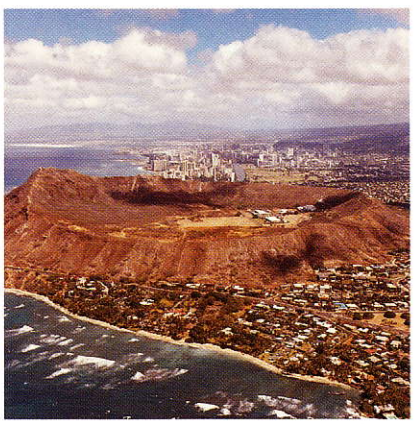
If You Really Want to See the Whole Picture...

Every day the skies become more crowded. The old techniques for handling air traffic are no longer satisfactory. But what to do? Unisys has the answer with the addition of mosaic capabilities to the En Route Automated Radar Tracking System (EARTS).

With the mosaic enhancement of EARTS, any controller can view any part of the entire radar coverage area because all radar data is combined into a large map through the use of a stereographic projection. Just as an artistic mosaic is made up of bits and pieces of various materials, the ATC mosaic combines many small pictures into one large composite (something akin to an aerial photograph).

Although the acronym EARTS implies specific en route responsibilities exclusively, EARTS, in fact, assumes responsibility for aircraft tracking from takeoff to landing. It's really the first certified consolidated control facility.

EARTS combines en route and terminal air traffic control functions. For en route control it monitors all low altitude airways and high altitude jet routes within its jurisdiction. As a terminal system it provides approach and departure control to area airports. At an EARTS facility, up to 24 en route sectors, approach and departure control positions, plus local or remote towers all operate simultaneously from one automation system. Because EARTS incorporates several unique features, both types of traffic control services can be provided by a single automation system. EARTS accepts radar input from 15 long range or short range sensors, whose scan rates typically range from 3-12 seconds and whose range may be from 40 to 250 nautical miles. For short range sensors, the controller utilizes a highly accurate slant/range single sensor display presentation which allows closer separation standards to be used; an obvious necessity in the terminal area. All sensors (long and short range) are used to provide a 2000 by 2000 nautical mile mosaic presentation for use by en route sector controllers.

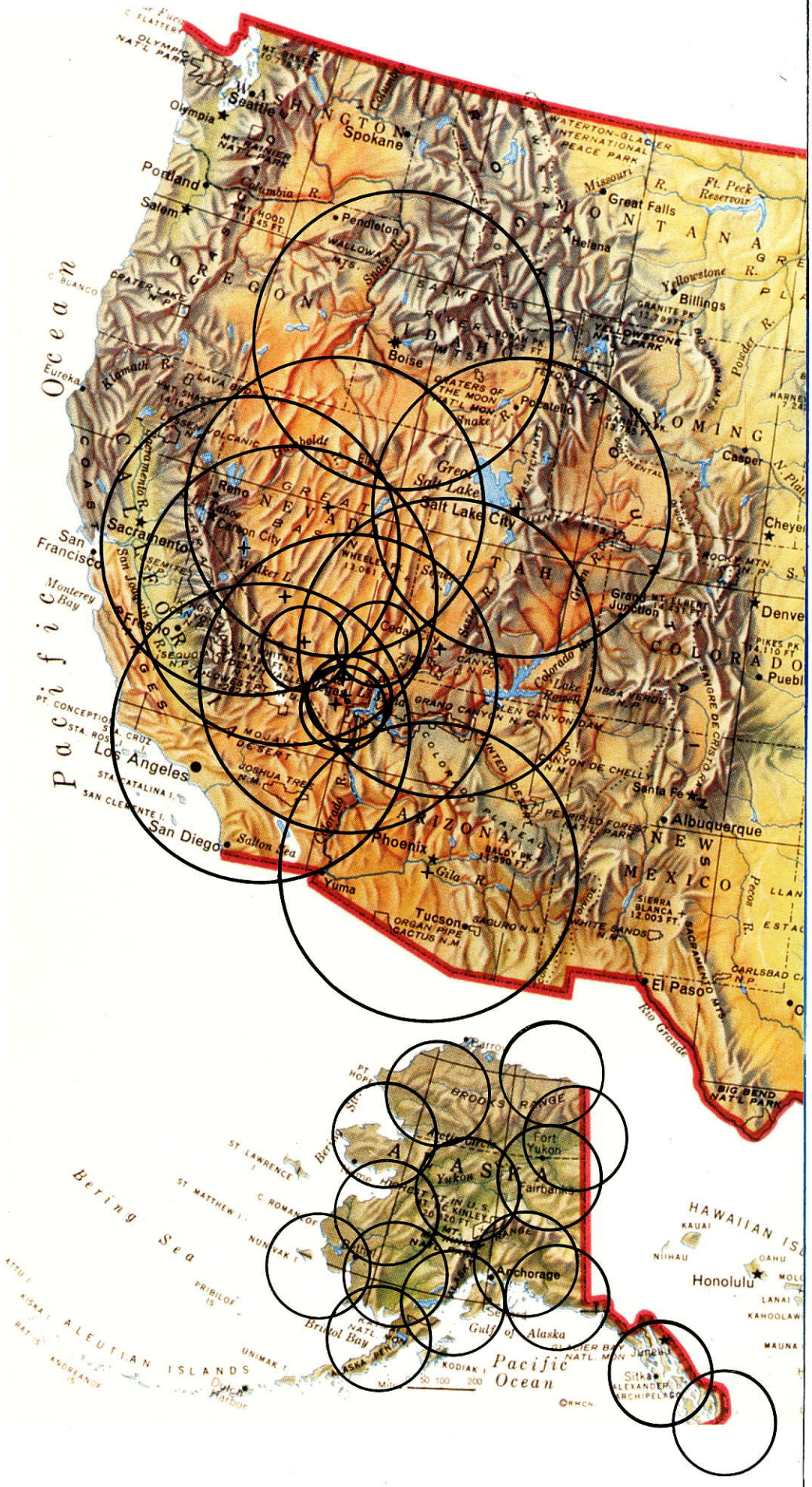


At the present time, EARTS is operational in San Juan at the Combined En Route Radar Approach Control (CERAP) facility controlling en route traffic south of Miami, and approach and departure traffic at Luis Munoz Marin International Airport. In Honolulu and Anchorage, EARTS supports the Air Route Traffic Control Centers for en route control along with interfacility services to adjacent ARTS II and ARTS III terminal control facilities. Finally, the illustration depicts the terminal area control, en route control and area surveillance available by means of EARTS at Nellis Air Force Base. As you can see, its quite a complete picture.

EARTS enhancements introduced at this time include:

- Mosaic and Slant/Range Display Presentation
- Conflict Alert including Mode C intruder warnings
- Minimum Safe Altitude Warnings
- 1000 Track Capacity
- Tracking supported by data borrowed from overlapping sensors
- Real Time Quality Control of radar data

Want to see the whole picture? Your Unisys Air Traffic Control representative can show you. It'll never look better.



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Printed in U S America

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