



Trusted on the Ground and in the Air

Innovative weather systems and services for the aviation industry since 1980.

WSI Pilotbrief™ - *Pre-flight briefing*

WSI InFlight™ - *Weather in the cockpit*



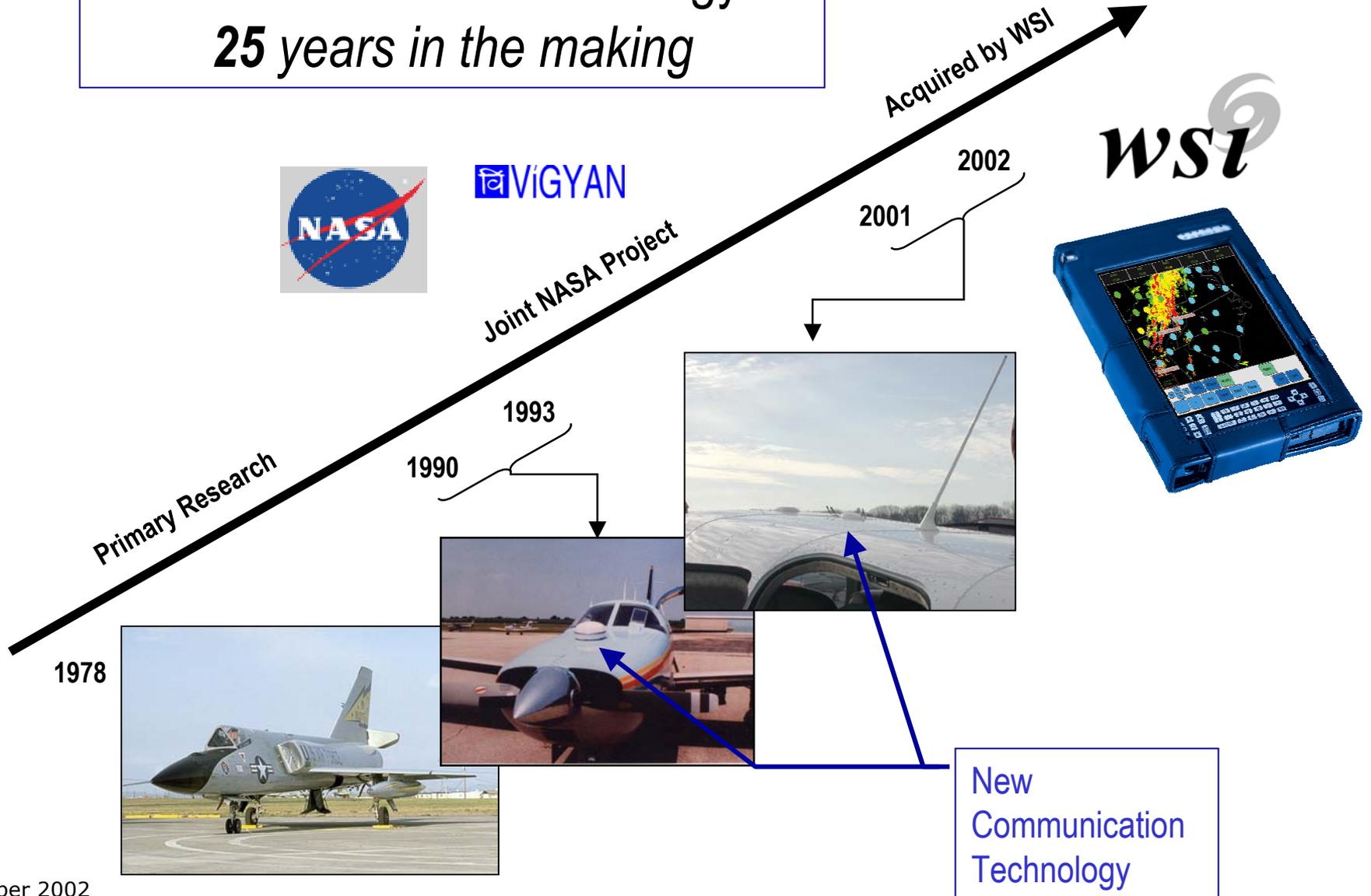
Presented to:

NASA WxAP Review

November 20-21, 2002

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Robust Proven Technology
25 years in the making



Pre-Flight

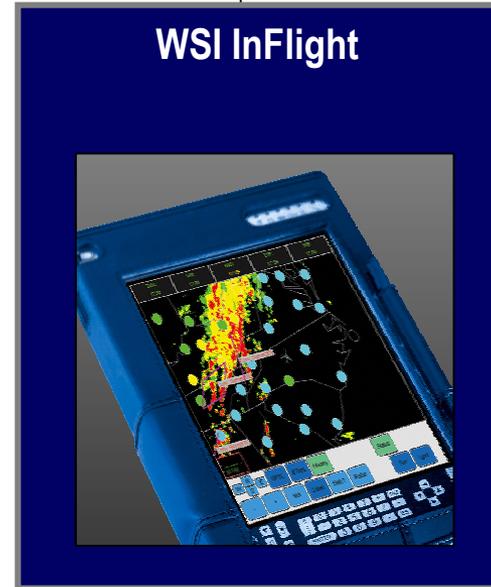
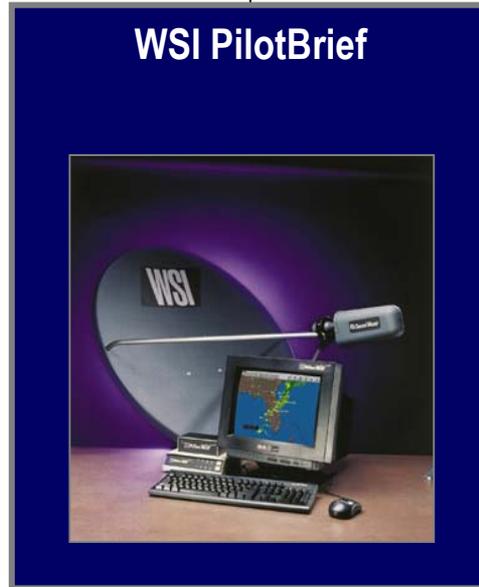
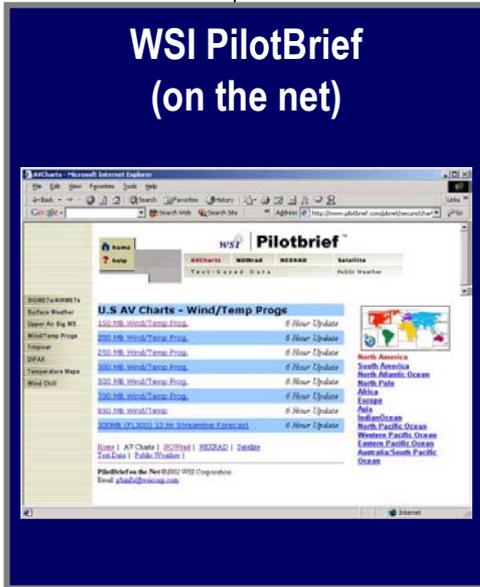
Airport

In-Flight

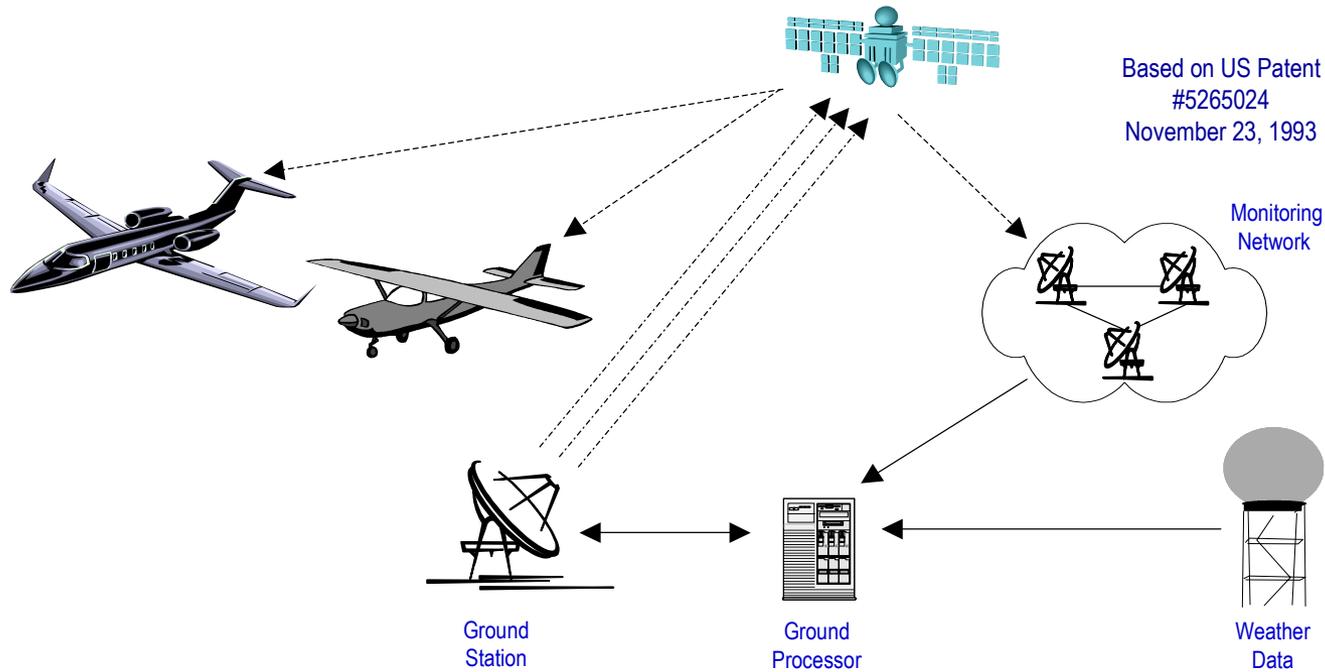
**WSI PilotBrief
(on the net)**

WSI PilotBrief

WSI InFlight



***Covering Pilots
"From Pre-Flight through Touch-Down"***



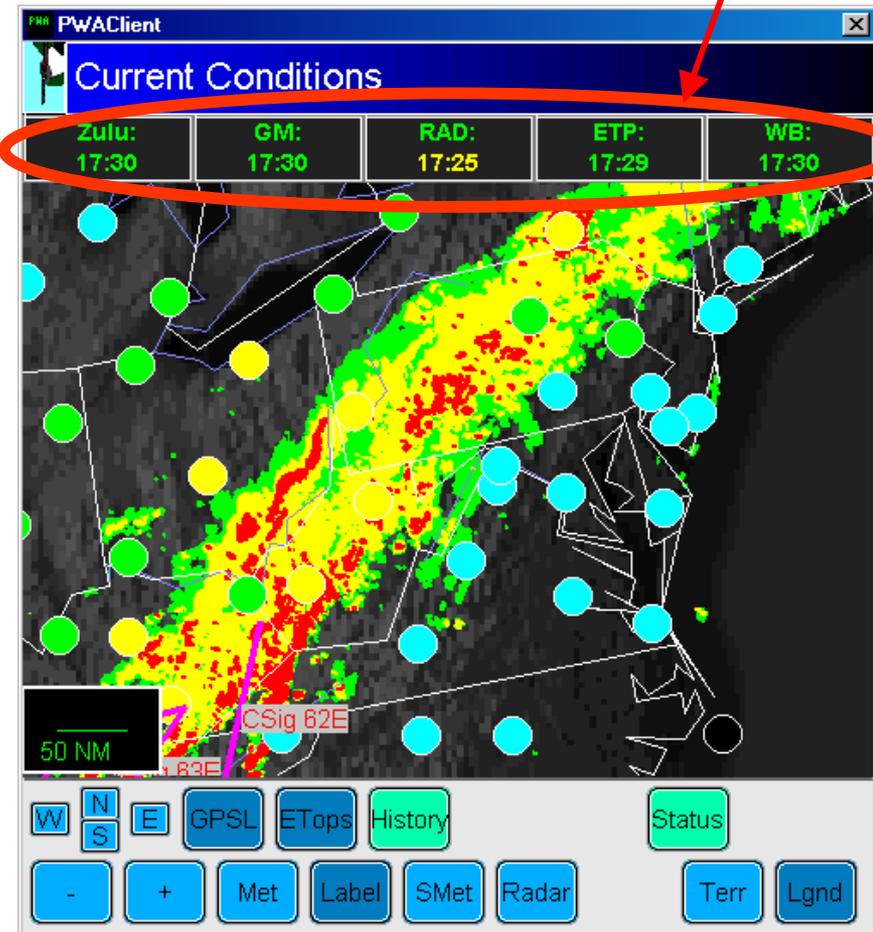
- **Continuously delivered satellite weather system for the cockpit**
- **Provides graphical and text weather data to the cockpit**
- **Displayed on customers existing avionics display (MFD/EFB)**

WSI InFlight: Key Benefits



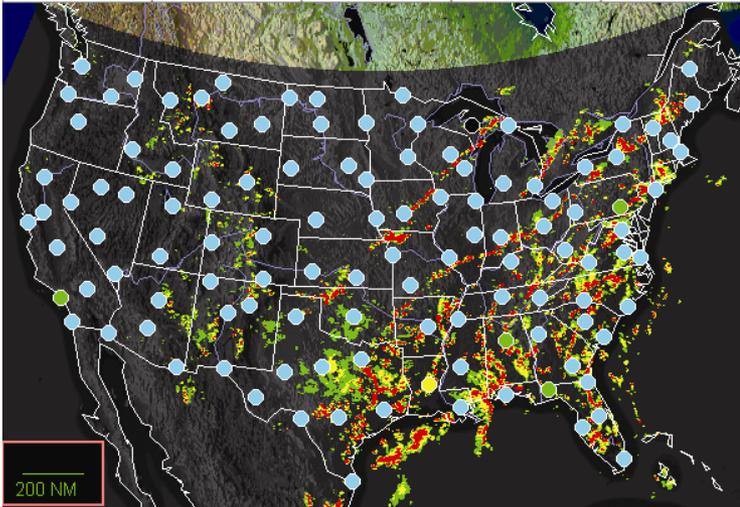
- Weather Data for the Continental U.S. is Continuously Refreshed Every 5 Minutes via Satellite Broadcast
- Available At ANY Altitude – Anywhere in the Continental U.S.
- Specifically Designed For Cockpit Use
- Flat Rate - “Unlimited Usage” Subscription Plans
- Delivered By WSI, The Trusted Leader in Aviation Weather

Age of data is indicated for each product





- Graphic Radar Mosaics
 - Full Continental U.S. Image
 - Brilliant WSI NOWrad® Radar
 - Animation Loops
- Graphic Representation of METAR & TAFS Including Trend Data
- Graphic Representation of SIGMETs, AIRMETS & Echo-Tops
- “Point & Click” Access to METAR, TAF, SIGMET & AIRMET Text



Intuitive Interface with
‘High-Glance’ Value

- **Receiver**

- Manufactured by: SANDIA aerospace
- Dimensions: 1.38in x 5.42in x 9.27in
- Weight: 1.5 lbs (excludes mounting tray and connectors)
- Power Requirement: 10.0 to 32 VDC,
Low Power <4W
- System Connector: 25 Pin Power/Data Connection
- Antenna Connector: TNC
- DO-160D, DO-178B In Progress
- Can be mounted inside or outside pressure vessel



- **Antenna**

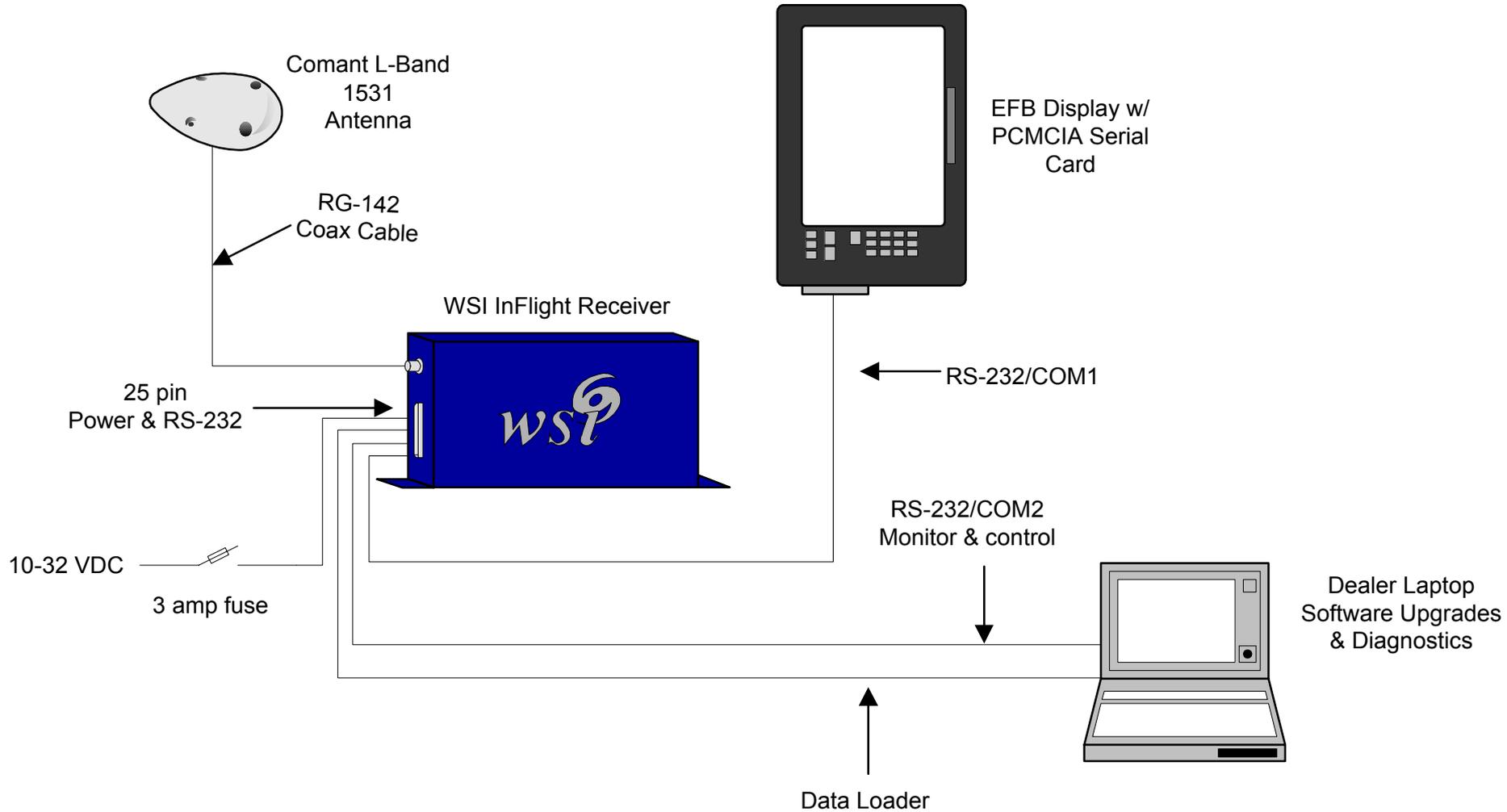
- Manufacturer: Comant
- Profile: Low Profile Teardrop
- Weight: 0.3lbs
- Height: 0.7in
- Connector: TNC
- DO-160D Complete



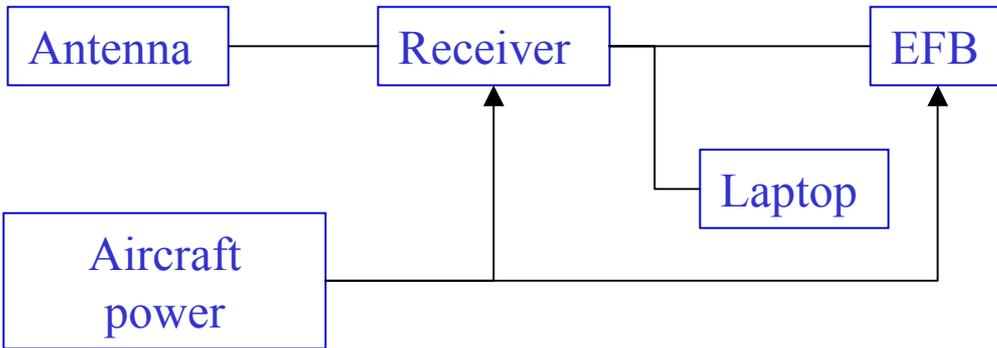
- **Other**

- Satellite: Geosynchronous L-Band Satellite
- Cabling: 50 ohm coax: RG-142

Non-Certified System Installation



Saratoga Installation



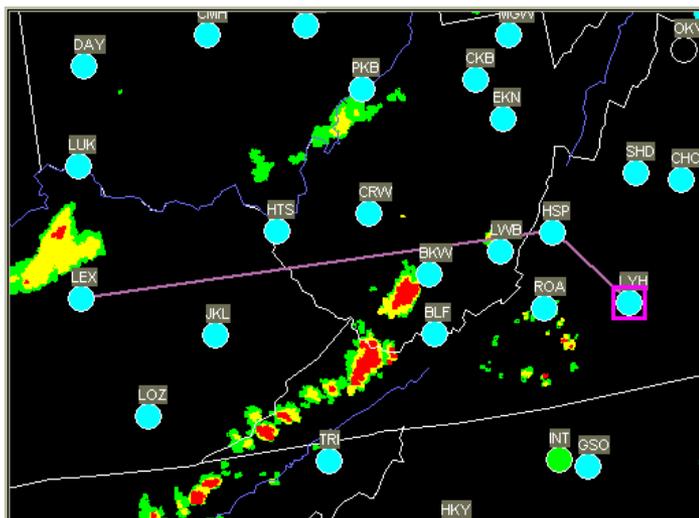
Malibu JetProp Installation



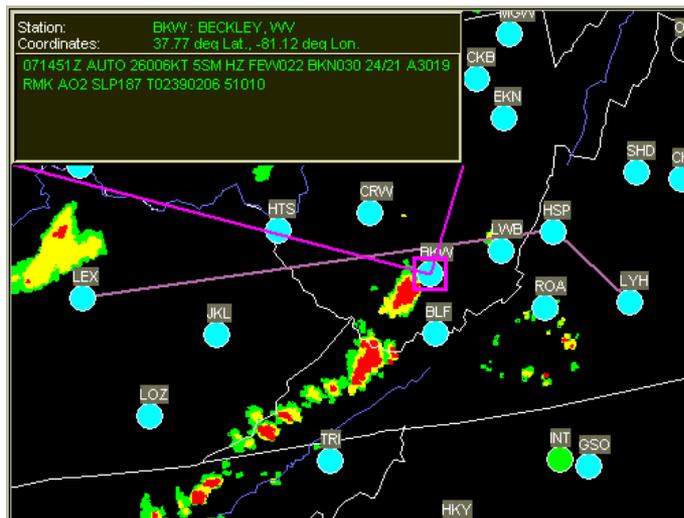
InFlight
Antenna
Placement

Laptop In Use Now
For Weather

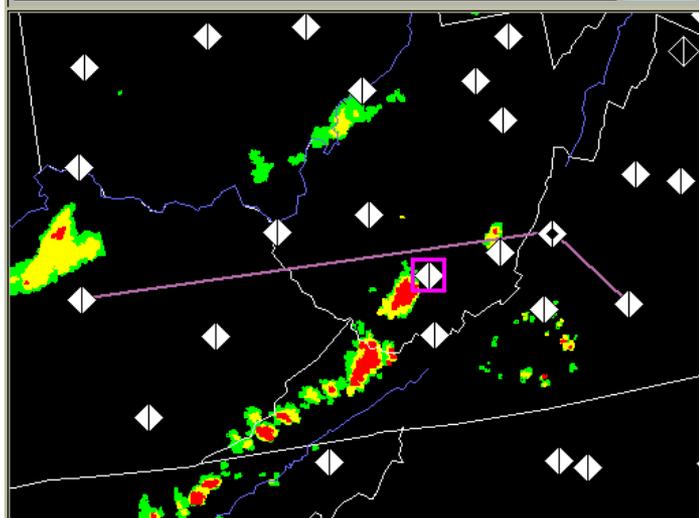




Current (Z)	RADAR	METAR	WBox	TAF
15:17Z	15:15Z	15:15Z	15:15Z	15:15Z



Current (Z)	RADAR	METAR	WBox	TAF
15:17Z	15:15Z	15:15Z	15:15Z	15:15Z

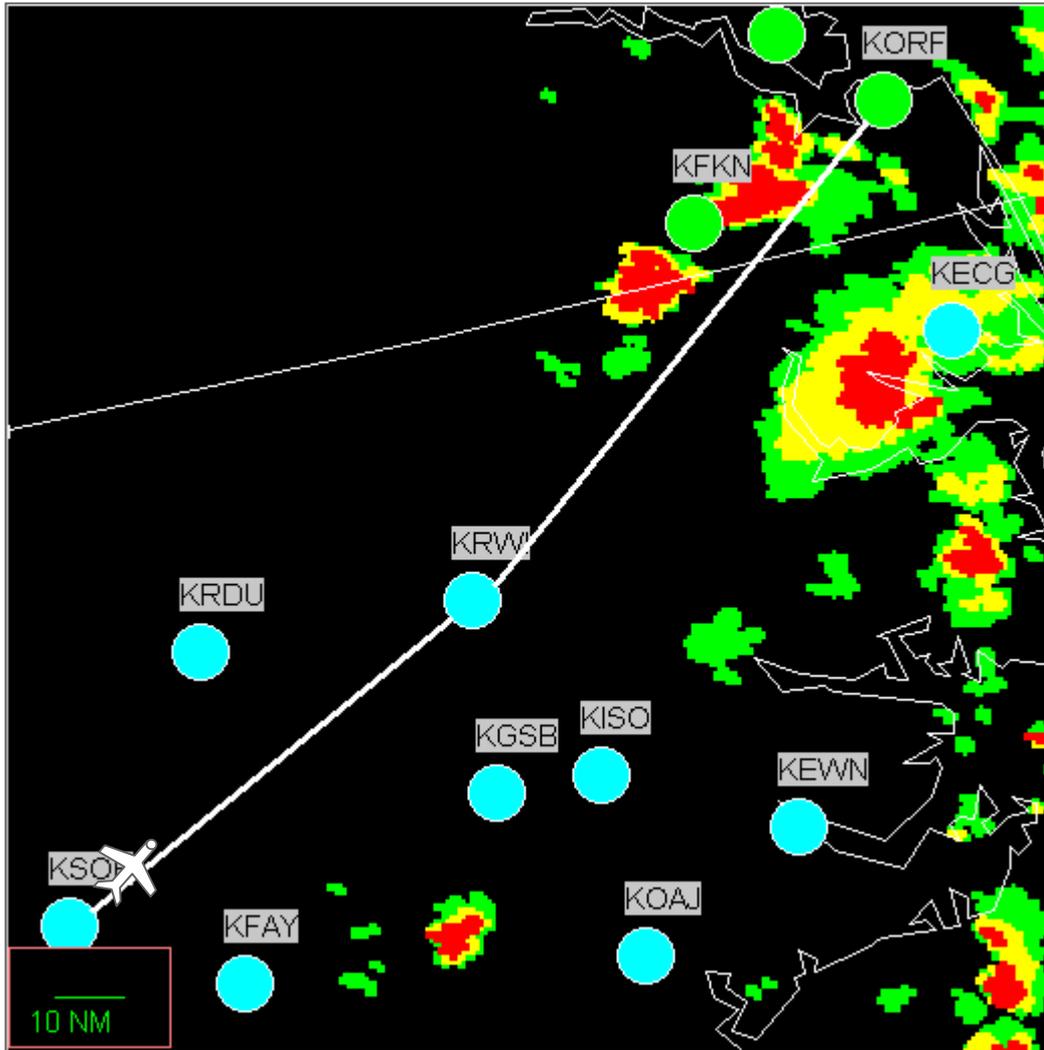


Current (Z)	RADAR	METAR	WBox	TAF
15:17Z	15:15Z	15:15Z	15:15Z	15:15Z

○ No data	◊ No sig. WX
● VFR	◊ Liquid Precip.
● MVFR	◊ Low Visib.
● IFR	◊ Solid Precip.
● LIFR	◊ Hzrd Phen.
● < CAT I	◊ Winds > 20KT

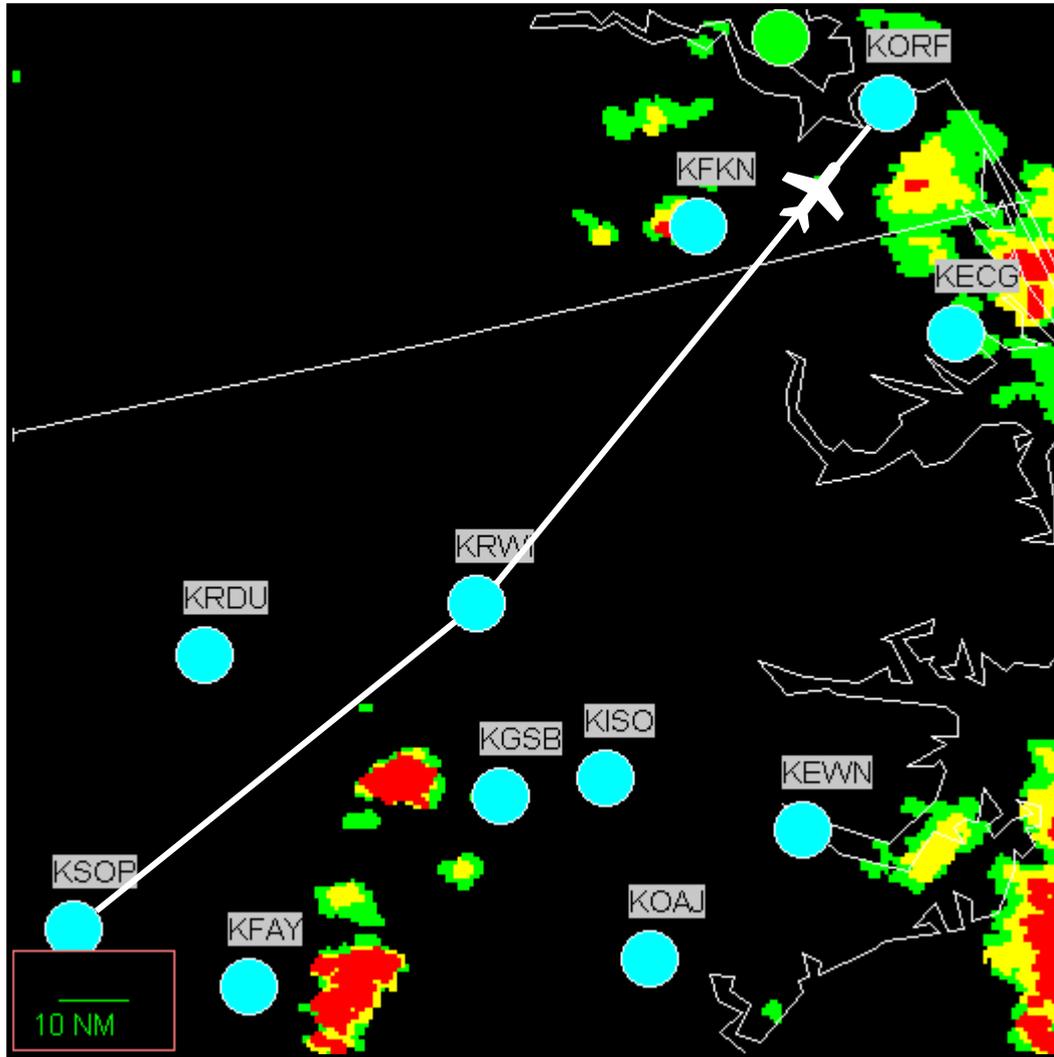
■ No data	■ Snow
■ < 20 DBZ	■ Mixed
■ 20-30 DBZ	
■ 30-40 DBZ	
■ > 40 DBZ	

- Colors compliant with RTCA DO-267
- High resolution radar image (2km grid)
- METARs, TAFs, SIGMETs, AIRMETs, EchoTops
- 5 minute update rate
- User interfaces for CT-1000, tablet computer EFBs, and laptops developed

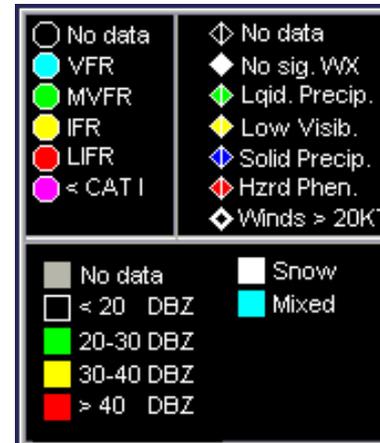


- Departed SOP (More County, NC) at 14:30 Local for ORF (Norfolk, VA)
- Storms Near Flight Path Moving Rapidly Northeast
- Prior to Takeoff, Radar History View Indicated the Storm Was Going to Pass Over ORF at Our Arrival Time
- We May Have to Divert for Weather

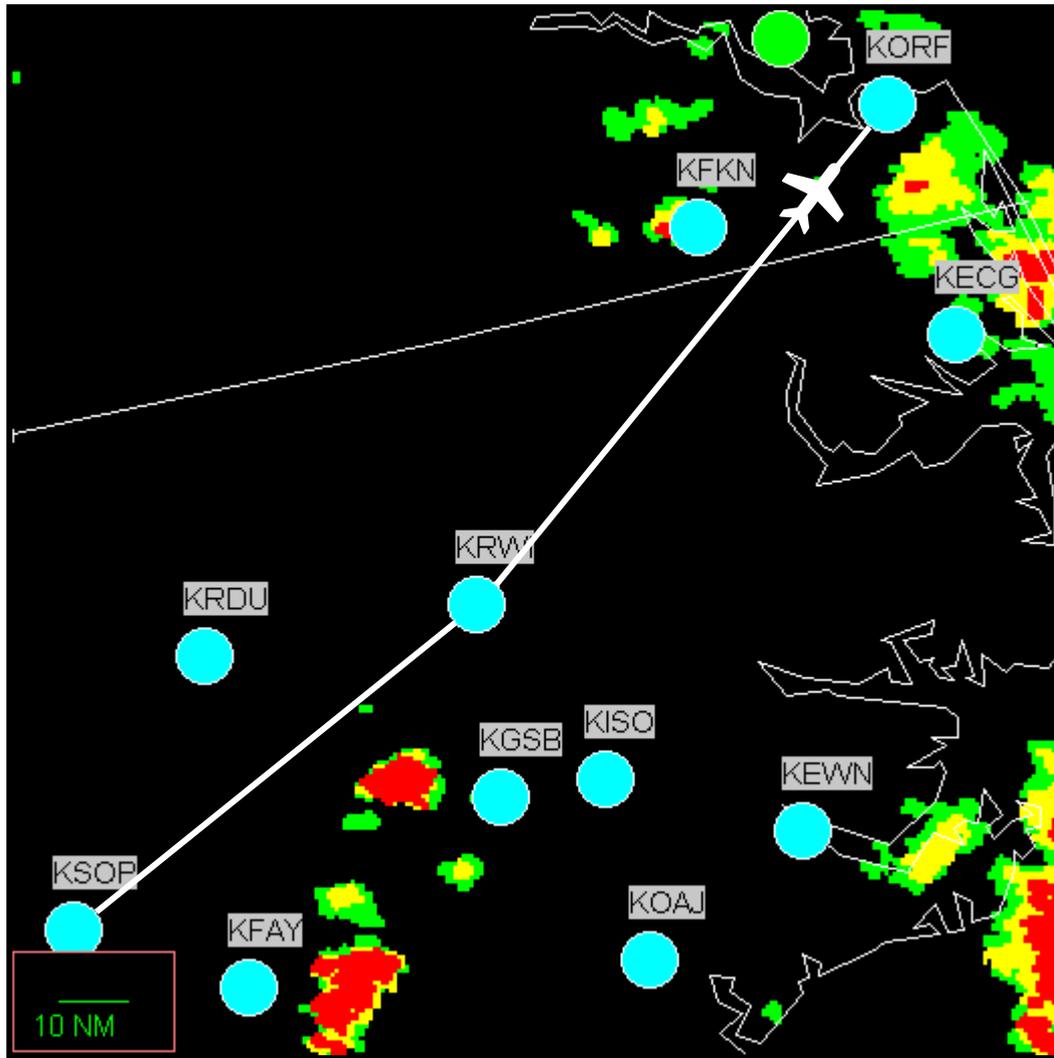
A PWA Flying Story - Trip Animation



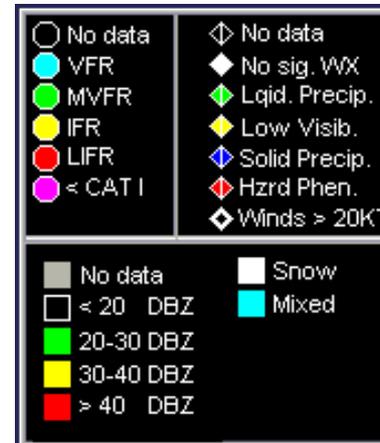
- Animation Loop Shows the Storm Dissipating As We Progressed Toward ORF
- Destination in the Clear!



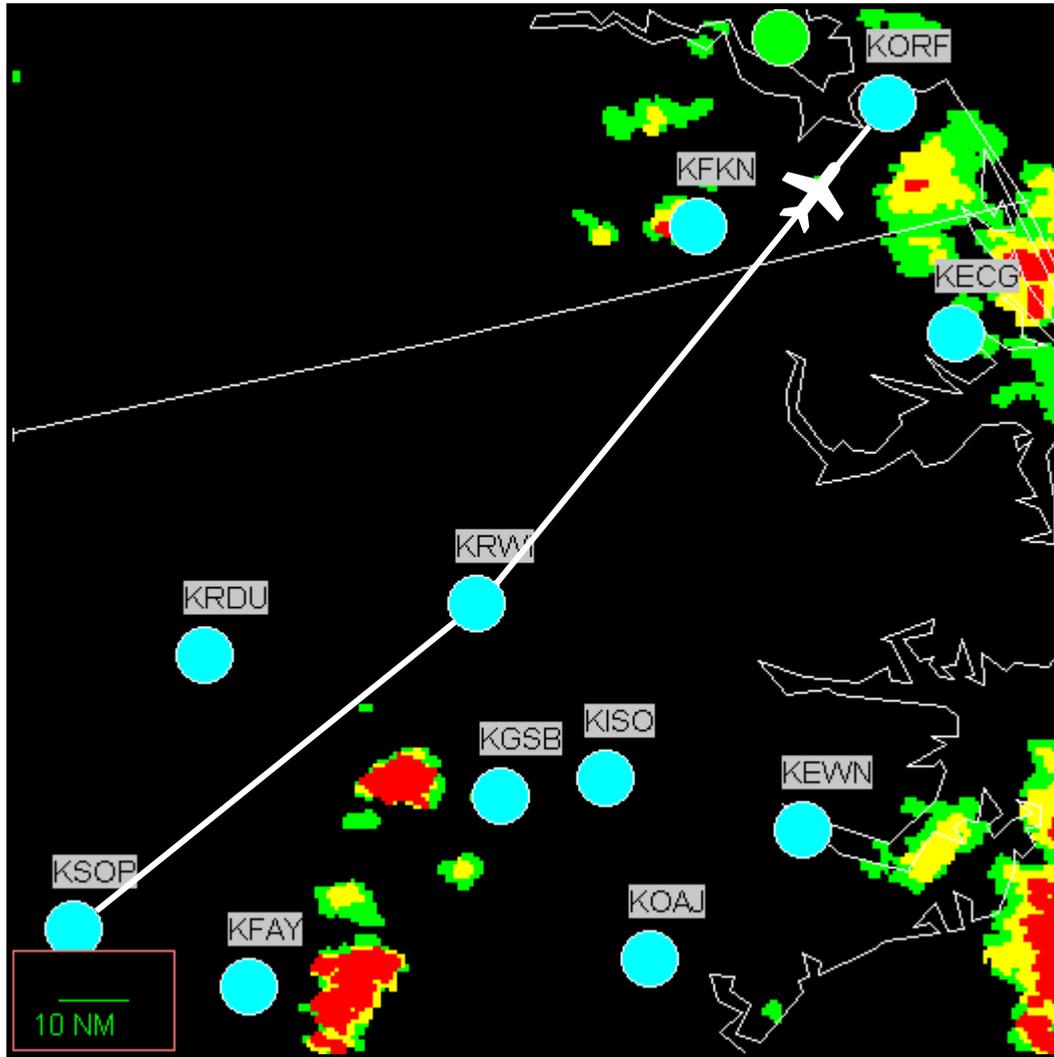
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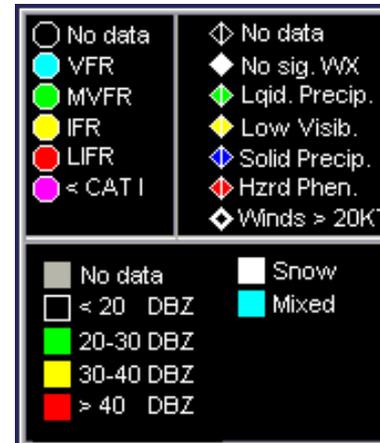
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A PWA Flying Story - Trip Animation



- Animation Loop Shows the Storm Dissipating As We Progressed Toward ORF
- Destination in the Clear!



ADR FG-3600

Northstar CT-1000



**Windows 98/00/NT
platforms**

UPS Aviation Technologies MX-20 Rockwell Collins Pro Line 21



**Rockwell
Collins**



- Planning iPAQ version for early 2003
- Sandel TAWS display will incorporate WSI InFlight
- Chelton Flight Systems (formerly Sierra Flight Systems) will incorporate WSI InFlight into their PFD
- Others to be announced in the near future



A NASA SBIR Success Story!

WHY WSI InFlight ...

1. Weather Data for the Continental U.S. is Continuously Updated in 5 Minute Cycles via Satellite Broadcast. Never Wait for the Most Current Data!
2. Available At ANY Altitude – Anywhere in the Continental U.S!
3. Specifically Designed For Cockpit Use!
4. Flat Rate - “Unlimited Usage” Subscription Plans!
5. Delivered By WSI, The Trusted Leader in Aviation Weather!