Introduction

Canadian In-Flight Information Broadcasting Association (CIFIB)

Providing in-cockpit weather and traffic services through deployment of UAT ground stations across Canada

EAA EAA245 - Ottawa

Why?

- An AOPA study† in the US indicates that providing pilots with timely weather and traffic service improves pilot decision making and General Aviation safety.

- Many GA pilots are already using tablets with ForeFlight, FltPlanGo, WingX or Garmin Pilot in the cockpit

† https://www.aopa.org/news-and-media/all-news/2019/april/18/study-shows-accidents-less-likely-with-ads-b-in

Organization

- Registered non-profit corporation in Canada

- **Directors – unpaid**
  - Mike Kay (President)
  - Richard Carothers (Vice President)
  - Steve McDowell (Treasurer)
  - Stephan Edelman
  - Ryan Dewsbury
  - Lee Coulman
  - Gord Millar

- **Contact**

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Technical Team

- Jeff Page
- Mike Kay
- Stephan Edelman
- Terry Holek
- Terry Fisher

Mission

CIFIB's mission:

- To improve General Aviation safety by providing up-to-date weather and traffic information to pilots operating in Canadian airspace through the deployment of UAT ground stations across Canada
- To expand the ground station network by identifying partners and sources of funding
- To improve pilot decision making in the cockpit by educating pilots about the availability of this source of information

Membership

- **Sites operating a UAT ground station:**
- Become a member of CIFIB with one designate to participate in annual general meeting
- Pay a one-time membership initiation fee ($2,000) that covers the cost of hardware and installation
- Pay an annual membership fee ($2,000) to cover the operating cost and general liability insurance.

Membership

- **CIFIB to provide:**
- UAT ground station transmitter
- Plan, coordinate and perform the installation
- Weather and traffic data feed
- General liability insurance for the site
- Radio license
- Maintain and support the equipment

Membership

- All provided equipment remains the property of CIFIB. Equipment is replaced or repaired at CIFIB's expense when required
- Equipment is removed by CIFIB when requested by site partner or when operating the ground station at the site is no longer possible
- Radio license application and renewal is managed by CIFIB
- Information transmitted by the ground station is controlled by CIFIB (with input from site)

Membership

- Minimum 1-year commitment required (non-refundable after insurance activation)
- Radio license application and renewal is managed by CIFIB
- Information transmitted by the ground station is controlled by CIFIB (with input from site) to maximize efficiency while also providing redundancy

Equipment

- **Ground Station Equipment**

Equipment

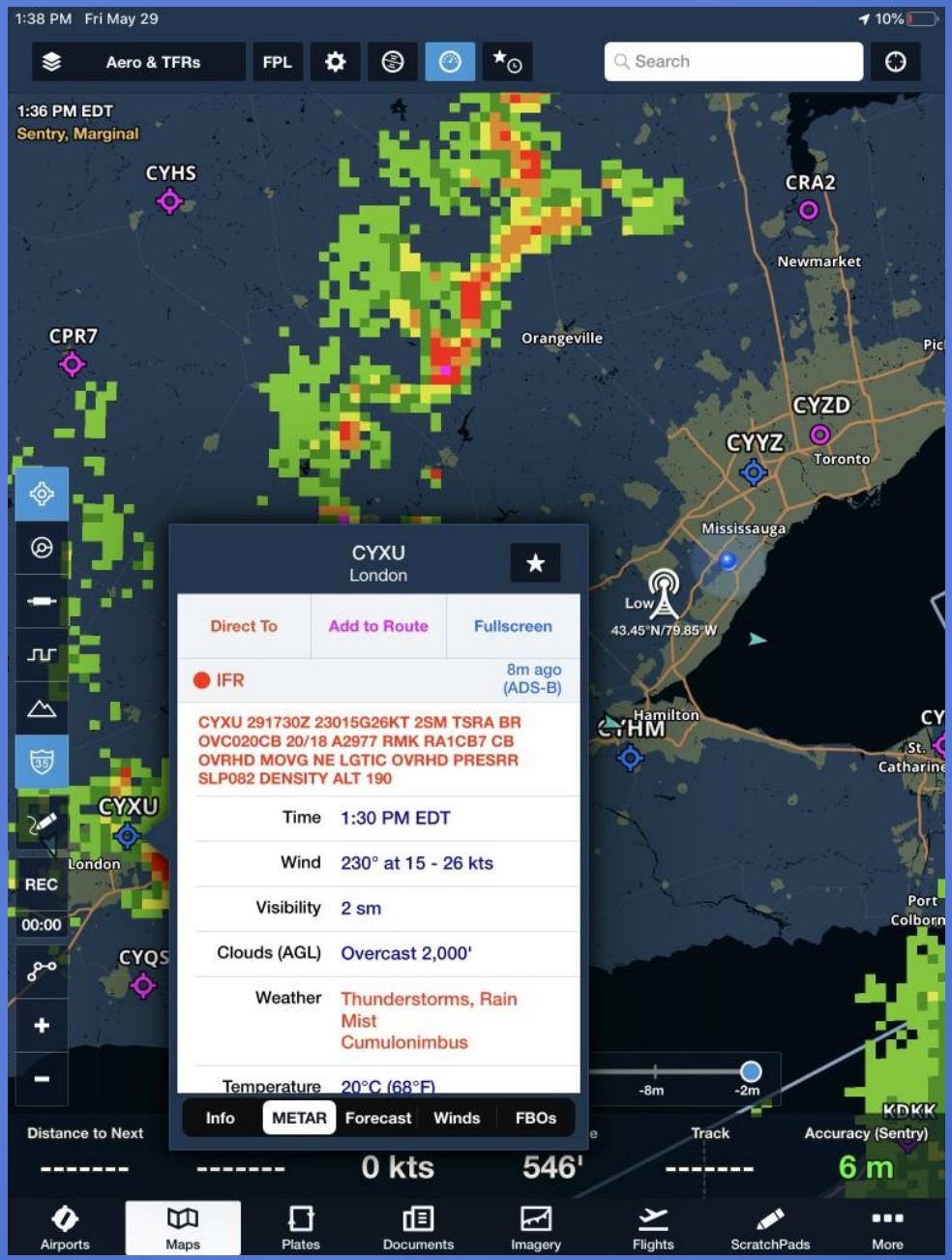
- Ground Station transmitter

Benefits

- **UAT Ground Station Sites:**
- Transmit up to date current weather (METAR/SPECI) and weather forecast (TAF – where available) for the airport as well as surrounding airports, including NemoWX weather stations
- Transmit FDs, upper winds and temperatures (planned 2022)
- Transmit PIREPs (planned 2022)
- Transmit national composite precipitation overlay
- Transmit local traffic from sources that include limited mode-C, NemoScout (flight school) and Flarm/OGN (glider) traffic

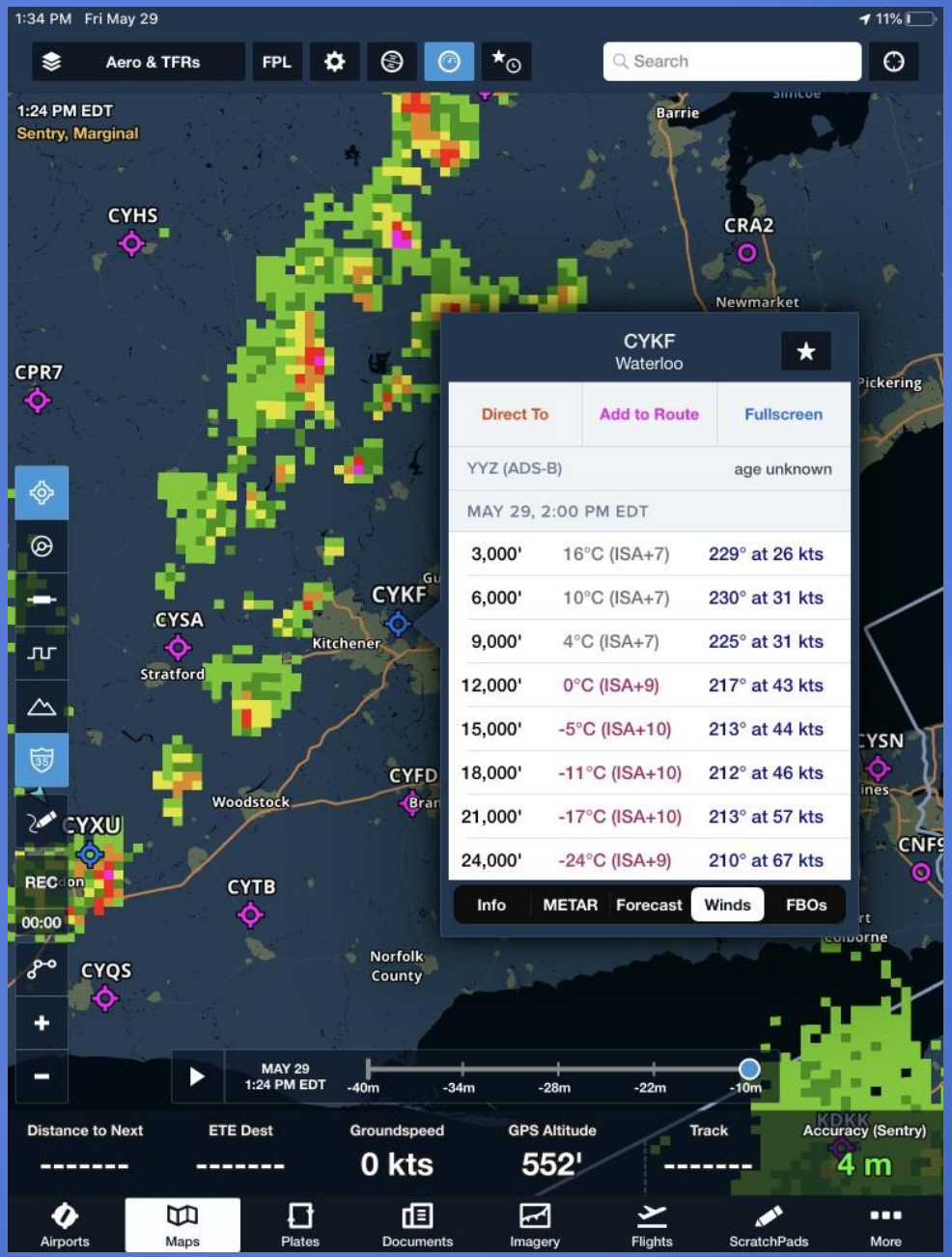
Benefits

- **METAR/SPECI**
- Displayed on ForeFlight



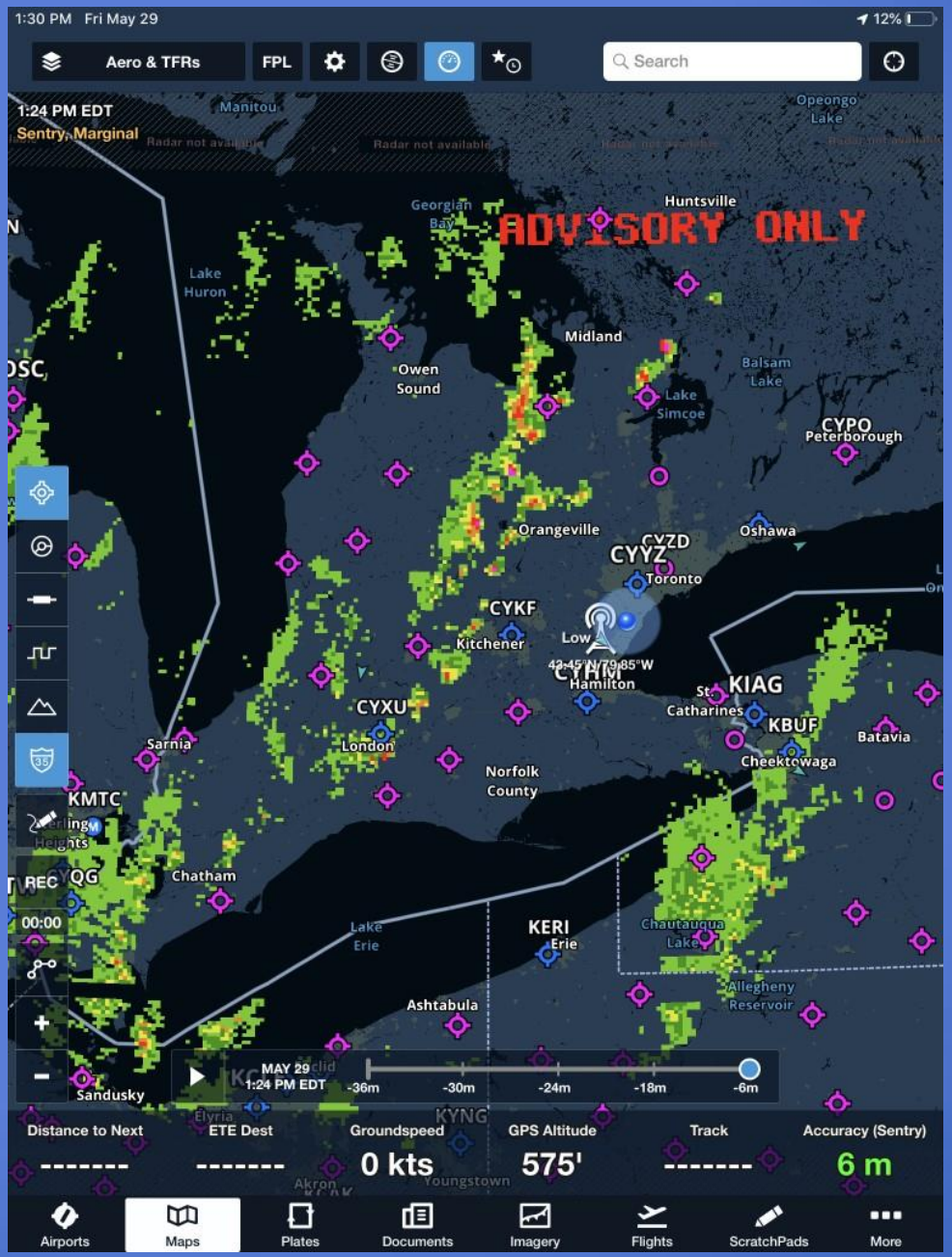
Benefits

- **UPPER WINDS**
- Displayed on ForeFlight



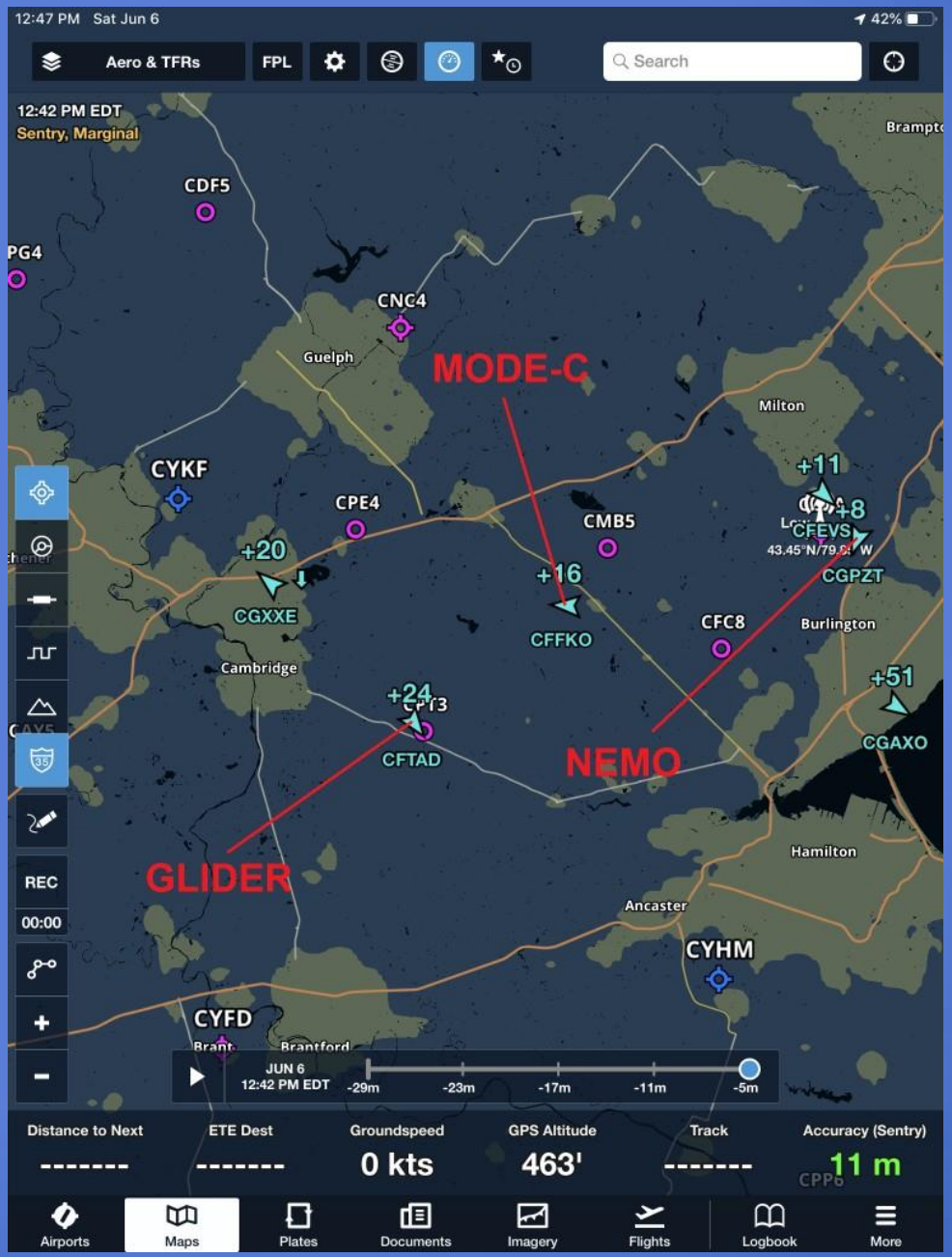
Benefits

- **RADAR**
- Displayed on ForeFlight



Benefits

- **TRAFFIC**
- Displayed on ForeFlight



Benefits

- Sites can define for which airports current weather and forecasts are transmitted

- Pilots will have access to this information while on the ground and up to 40-60nm from the airport while in the air (depends on altitude, obstacles and permitted power provided by the radio license)

Differences

- Weather imagery overlaid on the moving map is Environment Canada's conventional precipitation radar. In the US, weather imagery is based on NEXRAD's Doppler radar.
- CIFIB ground stations broadcast weather and traffic continuously. US ground stations transmit weather continuously, but transmit traffic only if an aircraft with ADS-B Out is nearby.
- CIFIB ground stations transmit traffic data including gliders using FLARM/OGN and flight school aircraft using NemoScout. In the US, these aircraft are not broadcast unless also equipped with ADS-B Out or transponders visible to ground-based radar.
- US ground stations transmit radar-based traffic. CIFIB is working to add this capability.
- CIFIB ground stations have a range of up to 60NM, dependent on the transmit power, topography, and altitude of the receiving aircraft. US ground stations have a range of 150NM or more, dependent on the same factors.

How to receive?

- In order to receive the ground station transmissions, a pilot must have an appropriate receiver capable of receiving and decoding UAT 978MHz:

- Stratus 2, or 3
- Sentry or Sentry Mini
- Stratux
- Dynon DRX portable
- Garmin GDL series portable
- …with Garmin Pilot, ForeFlight, WingX
- or FltPlanGo

How to receive?

- …or integrated equipment in the aircraft

- Garmin GTN-750
- L3Harris Lynx
- …etc.

Status

Active CIFIB UAT deployments

- Stratford Municipal Airport (CYSA)
- Burlington Executive Airpark (CZBA)
- Parry Sound Municipal Airport (CNK4)

Future

Planned CIFIB UAT deployments (2022)

- Oshawa Executive Airport (CYOO)
- Saugeen Municipal Airport (CHYS)
- Ottawa Macdonald–Cartier International Airport (CYOW)
- High River Airport (CEN4)

Potential CIFIB UAT deployments (TBD)

- Gore Bay Airport (CYZE)
- Buttonville Municipal Airport (CYKZ)

NemoScout

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GUELPH FLIGHT CENTRE
Waterloo Wellington FLIGHT CENTRE
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BRAMPTON FLIGHT CENTRE
SKYVIEW ULTRALIGHTS FLIGHT SCHOOL
Brantford Flight Centre

NemoScout Active Collision Avoidance Transponder

Provides traffic feed for CIFIB UAT ground stations

Order online at: **https://shop.nemoscout.com**

Use discount code **EAA245** to receive $25 off

Questions?

- Please do not hesitate to contact us for any follow up questions.

- Your CIFIB presenters today:

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