## Canadian Mission Control Center Canadian Beacon Registry



Beacon Manufacturers Workshop Captain Keith Wohlgemuth



## Outline

- CMCC & CBR Intro
- CBR Demo
- CBR Activity
- ABRC
- Beacon Anomalies
- What can you do to help?
- Contact Information and Questions







For the last year, we have only had 1 full time staff (plus 1 part time).

Stats are in separate slideshow for distribution.



The website is fully bilingual and fully accessible in accordance with common internet standards.

How well did this role out? We have had no major software bugs (little ones – yes).



Main page. Even though some of the screen captures are cropped, all pages maintain the same header.





Once logged in, the tabs are always visable.

PROFILE BEACON CONTACTS A	IRCRAFT VESSEL LAND LOGOUT
	User name: cmcc2@sarnet.dnd.ca (216
If you are registering a new beacon, you can end beacon from a previously registered owner you v (CBR) to inform them of your purchase. They in account. Once you've registered your beacon be well as where that beacon will be used. For exar	ter your information here. If you have bought your will need to contact the Canadian Beacon Registry turn can transfer all beacon information to your sure to register emergency contacts to the beacon a nple, on an aircraft, vessel or land activity.
To register a new beacon click on the ' <u>+ Add A B</u>	Beacon link'.
To view registered beacon information, click on t	the beacon hexcode or nickname.
To edit information on a registered beacon, click link and follow the instructions given.	on the beacon hexcode or nickname then click the e
*** Please add a minimum of two emergency co add your emergency contacts. Once added, plea correspond to. ****	ontacts to your registration. Click on CONTACTS tab to se attach them to the specific beacon that they
Your Registered Beacons	
+ 0.	dd A Beacon
2787840000FFBFF	Updated 3 January, 2012
278E6DA9B8FFBFF	Updated 30 July, 2012

2787840000FFBFF		Updated 3 January, 2012
278E6DA9B8FFBFF		Updated 30 July, 2012
Туре	PLB [ <u>Edit]</u>	
Current Status	Active and in Use	
Current Location	TESTING (assignment)	
Emergency Contacts	BRUCE WAYNE CMCC DUTY OPERATOR	
2794F1203F81FE0		Updated 3 January, 2012
		<u></u>

Beacon info expanded.

eacon Inform	ation		
PROFILE BEACO	N CONTACTS AIRCRAFT	VESSEL LAND LOGOUT	-
		User name: cmcc2@sarnet.dnd.ca (21667	)
Beacon Inform	ation		
Hex Code	278E6DA9B8FFBFF		
Туре	PLB		
Manufacturer	ACR Electronics Inc		
Model	PLB-375 (ResQLink)		
Status	Active and in Use		
Internal Tracking Number / Nickname			
Comments		E	
Date Registered	2011-11-08 15:09:47.000		
Last Updated On	2012-07-30 17:32:08.000		
	Save		
	Cancel		

Edit beacon.

PROFILE BEACO	CONTA	CTS AIRCR	AFT VESS	EL LAND	LOGOUT
			User i	name: cmcc2(	@sarnet.dnd.ca (2
The Hexcode and Cl register. The Checks Hexcode you have e	necksum in sum, while entered is	nformation o e optional, w in fact corre	an be foun ill allow the ct.	d on the be system to	eacon you wish verify that the
Beacon Inform	ation				* - Poquir
					Kequi
Enter Beacon Hex			*		
Enter Beacon Hex Code			*		
Enter Beacon Hex Code Enter Beacon Checksum			]*		
Enter Beacon Hex Code Enter Beacon Checksum			]*		
Enter Beacon Hex Code Enter Beacon Checksum		Save	] -		

Add beacon.

PROFILE BEACON	CONTACTS AIRCRAFT VE	SSEL LAND LOGOUT		
	Us	er name: cmcc2@sarnet.dnd.ca (21667		
Your emergency contacts will re send a distress signal. It is there	ceive the initial phone call from efore imperative that you keep y	Search & Rescue should your beacon your emergency contacts up to date.		
Fo register a new contact, click the ' <u>+ Add A Contact</u> '.				
To View information about a reg	o View information about a registered contact, click on the contact's name.			
To edit or update information at link.	o edit or update information about a registered contact, click the contacts name, then click the edit nk.			
Edit Contact Info	mation			
		Beacon(s) assigned No beacons assigned		
	+ Add A Contact			
BRUCE WAYNE		Updated: 26 September, 2012		
BRUCE WAYNE		Updated: 26 September, 2012		
CMCC DUTY OPERATOR		Updated: 26 September, 2012		
Contact	CMCC DUTY OPERATOR [Edit]			
Phone Numbers	Work (613) 392-2811			
Contact For Beacon	2787840000FFBFF 278E6DA9B8FFBFF 2794F1203F81FE0			

Contacts.

- Enter Contact Information	Contact For Beacon
* - Require	ed           Beacons         2787840000FRBF [Remove this beacon]           2796E0A98BFFRBF [Remove this beacon]         2794F1203F81FE0 [Remove this beacon]
Last Name * First Language *	Contact For Beacon
Company	Save
Address 1	
Address 2	Contact Number
City	NOTE Enter your contact numbers in the order you wish to be contacted. I.E. first number on the list will be called first, second on the list will be contacted second, etc.
CountrySalect	Phone TypeSelect *
Province/StateSelect	CountrySelect  *
Postal Code	Area Code *
Email	Phone Number *
RelationshipSelect	Extension (Maximum 6 digits)
Comments A	Phone TypeSelect
	CountrySelect-
	Area Code
	Phone Number
	Extension (Maximum 6 digits)

Edit / add contact. Top right screen capture is at the top if editing a contact.

PROFILE BEACO	N CONTACTS AIRCRAFT VESSEL LAND LOGOUT
	User name: cmcc2@sarnet.dnd.ca (21
If you are registering an Em place this beacon on. This w may be in distress.	nergency Locator Transmitter (ELT), you must have a registered aircraft vill give Search & Rescue some sort of indication of the type of aircraft ti
To register a new aircraft, cl	lick on the ' <u>+ Add Aircraft</u> ' link and follow the instructions given.
To view registered aircraft in	nformation, click on the aircraft tail number.
To edit information on regist instructions given.	tered aircraft, click on the tail number then click the edit link and follow
*** Please add a minimum o add your emergency contact correspond to. ****	of two emergency contacts to your registration. Click on CONTACTS tab ts. Once added, please attach them to the specific beacon that they
-Your Registere	d Aircraft
	Beacon(s) assigned No beacons assigned
	+ Add Aircraft
C-IOUF	Updated: 26 September, 2012
Tail Number	C-IOUF [Edit]
Manufacturer	Cessna
Model	172
Model Type	172 AEROPLANE

Aircraft – aircraft info expanded.

Beacons	
Beacons 2787840000FFBFF Remove Beacon	
Attach Beacon	
Save	
Edit Registered Aircraft Information	
Aircraft Sarial Number	* - Required
Tail Number	
C-IOUF *	
Pretrovercon tex	
MODE: 172 *	
Type AEROPLANE *	
Home Airport Trenton Airport (CFB Trenton)	*
Propulsion Type PISTON 💌 *	
Engines 1	
Primary Colour White 💌 *	
Secondary Colour Red *	
Features BLUE STRIPES - CF ALOGO ON SIDE	
Radio Equipment VHF	
Number of Crew 1 =	
Number of Seats 5 =	
Comments	

Edit (add) aircraft.

Manager Trafformention	Veccel Informa	tion
vessel information	Cosci mollid	
		* - Required
PROFILE BEACON CONTACTS AIRCRAFT VESSEL LAND LOGOUT	Vessel Name	FV KEN DRYDEN *
User name: cmcc2@sarnet.dnd.ca (21667)	Call Size	
If you are registering an Emergency Position Indicating Radio Beacon (EPIRB), you must have a	Call Sign	HABS *
registered vessel to place this beacon on. This will give Search & Rescue some sort of indication of the tune of vessel that may be in distress.	Panistration Number	
To projekto a procession of all of an the 14 Add Marrell Rela	Registration Number	395679
To register a new vessel, cick on the <u>+ Add vessel</u> link.	Hama Harbour	
To view registered vessel information, click on the vessel name.	Home Harbour	TRENTON
To edit information on a registered vessel, click on the vessel name then click the edit link and follow the instructions given.	Number of Crew	
\$88 Diagon add a minimum of two emergency contacts to your registration. Click on CONTACTS tab to	Members	8
add your emergency contacts. Once added, please attach them to the specific beacon that they correspond to. ****	Hull Colour	Black 💌 *
Your Registered Vessels		
Bascon(a) assigned	Sail Colour	
No beacons assigned		
+ Add Vessel	Structure Colour	White 💌 *
FV KEN DRYDEN Updated: 26 September, 2012		
	Hull Type	FIBERGLASS - MONOHULL *
Vessel Name PV KEN DRYDEN [Edit]		
	Vessel Type	FISHING - COMMERCIAL 💌 *
Call Sign HABS		
	Propulsion Type	Propulsion Method
		Tokanad 🖂
Pionino - commenciac	Power	Inboard
	at a Fil	
MMS1 NUMBER 31600000	Select	Select
The second se		
Beacons 2794F1203F81FE0	Select-	Select
	Special Features	
		SUITS/LIFE RAFT/
		STANDARD KIT
		*
	Length (meters)	
	congen (maters)	27.00
	Toppage	
	Termage	15
	Radio Equipment	VHE/DSC -I ORAN/
		CAPTAIN CELL#
		613-799-0000
		*
	Inmarsat Number	001 (857000
		8814567830
	MMSI Number	215000000
		31000000
	Comments	A

Vessel tab, again same look and feel. Edit vessel (plus the common part at the top to remove or add a beacon to the vessel just like the aircraft page.



Land use tab for detailed PLB use.

Beacons	
Beacons	278E6DA9B8FFBFF [Ramove]
Attach Beacon	Salect
	Save
-How do you use	e your PLB?
	* - Required
Nickname / Activity for this PLB	смсс -
Activities	
Land	Sea Air
Hiking	Boating Handgliding
Fishing	Kayaking Flying
Mountain Climbing	Fishing UltraLight
Hunting	Sailing
Details	Details
	i
Additional Information	This beacon is held in CMCC and is made
	members. It is occasionally used for testing.

Land use tab for detailed PLB use.



Note appears after any save.



For admin and SAR responders only, we now have admin notes available.



Further details:

ELT's with no 24 bit: Canadian coding requires ELTs to use serial user with 24 bit address. Those not matching this were verified for errors.

Unregistered ELT's with 24 bit: Unregistered ELTs with a 24 bit encoded that were identified through Alerts and the ABRC were sent to the CBR who can quickly correlate to a specific Canadian aircraft and contact the owner for registration.

Mismatch ELT's – Registered tail vs 24 Bit: When differences between the 24 bit encoded information (and the associated tail mark) and the aircraft tail number in the registration file were found, the reasoning was checked to verify the right beacon was registered to the right aircraft and beacon coding was correct.

Location protocol – not \*FFBFF: Hex ids verified for default values in the registry files.

4<sup>th</sup> digit miscode: Typing errors have been noted when people enter a '0' instead of a 'D' for the fourth character.

Mass mail out: A letter was mailed to all owners who's files had not been updated in the preceding year.



Mass emails: Similar to the mass mail outs, emails were sent to all owners who had files that had not been updated in the prior year.

Paper file verification: All paper files were verified to ensure the accurate entry of all data.

Beacon replacement with updated TAC: Beacons found that had been replaced with a newer model. The replacement beacon was recoded with the same information as the old beacon however, due to the new TAC number, the code changed and was not updated. Affected TAC numbers checked and corrected as required. The ABRC highlighted this issue.

Data cleansing preparing for new website: Detailed analysis of all fields to verify format and completeness of data for transition into new and more stringent database. Many bits of missing data found and corrected (ie phone numbers missing 1 or 2 numbers).

Ownership transfers: Many of the above activities generated replies from beacon owners that they had sold their beacon (and vessel / aircraft). These transfers were

completed.

Hex id pattern recognition: Many patterns identified to speed the recognition of improper codes. This helps ensure that more errors of many types are captured and corrected in registration files.



SOP's and training package: General improvement in the service that we offer beacon owners. These

Through all of our efforts, we have been impressing on beacon owners the importance of accurate information. During times that we have found errors and alerted beacon owners requesting their help to correct it, they have been overwhelmingly impressed that we are watching their backs and correcting these errors. This has started to gain us an extremely positive reputation with owners = owners talk = more beacons registered.



This is the idea that we were 'dreaming' of at the last BMW in May 2011. Today, it is in the last parts of Beta Testing and will be soon moving into a more stabilised version.



First the response from the public: [insert email is in march from Angie]

Please remember that all of the CBR activity already discussed predates this software. These CBR activities have helped to correct outdated and invalid information and to condition the public to being asked to update their files.

How does it work: Automatically! It is a service running on one of our desktop computers (soon to migrated to a service on a server).

The Canadian test bursts on our backup LUT are compared to the registration database. If they are unregistered, the hex id is added to a list that is emailed to the CBR every two weeks for CBR follow-up. For the hex ids that are registered, the registration is checked for an email or fax and if it is current. An email (or fax if no email is available) is generated with a message to alert the owner that their test was received, there was xx bursts received in the last xx days, and that their file is up to date (not up to date). If it is not up to date, a sentence is added directing them to login to the website (or call the CBR) and update their file. For those that do not have either an email or fax, they are added to a list that is also emailed to the CBR every two weeks for manual follow-up.

We have a limit of one email/fax per day. The exception is that if we receive more than 30 bursts in a calendar day, we send another email

(and cc our CMCC Duty Operator and the CBR) advising the excess test bursts that have been received.

Registration rate report – based on inverted frame bursts

Unregistered report – as detailed above

Fax report – summary of faxes sent is emailed to CBR every two weeks

Gives automatic end to end verification for the owner

User verifies beacon functions, is properly coded, registered, and up to date

User gains confidence

Identifies outdated files – The CBR is cced on all emails. Also, if an email fails, the CBR is also alerted. These files are then tagged for manual follow-up.

Ultimately reduces workload by educating beacon users, allows for an automatic message to be distributed, and especially points beacon owners to do what we want (update their files) and do it online.



## **Beacon Anomalies**

- Switching between Test protocol and real code
  - ELT's (real and false alarm cases)
  - EPIRB (real distress and no distress both with resources launched)



 Random not user initiated continuous inverted frame sync (ABRC now alerting = CMCC or CBR follow-up)





Info – email to CBR

New registration forms will have info on back side. There will be two, one in English and one if French. We will have them posted on our website in the next few weeks as we have to have them translated.

## **Contact Information**

Canadian Beacon Registry c/o CMCC 8 Wing Trenton PO Box 1000 Station Forces Astra, Ontario K0K 3W0 p. 1-877-406-7671 f. 1-877-406-3298 cbr@sarnet.dnd.ca www.cbr-rcb.ca

Ms. Angie Cornish CBR Manager 613-965-3716 cornisha@sarnet.dnd.ca CMCC:

Major Gilles Bourgoin Officer in Charge 613-965-4148 cell: 613-391-1390 bourgoing@sarnet.dnd.ca

Captain Keith Wohlgemuth Deputy Officer in Charge 613-965-7174 cell: 613-242-3836 wohlgemuthk@sarnet.dnd.ca



