

AUTHOR

## *Titanic* - Lessons for Emergency Communica- tions

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She went to a freezing North Atlantic grave a hundred years ago, April 15, 1912, having slit her hull open on an iceberg she couldn't avoid. Her story resonates across time: loss of life, criminal arrogance, heroic wireless operators, and her band playing on a sinking deck, serenading the survivors, the dying and the dead as they themselves faced their own cold wet demise. The *S.S. Titanic* is the ship of legend.<sup>1</sup>

The dedication to duty of the Marconi wireless operators, Jack Phillips and Harold Bride, is both documented and itself legendary.<sup>2</sup> Phillips stuck to his key even after Captain Edward Smith relieved him and Bride of duty as the ship sank. Phillips' SOS and CQD signals brought the rescue ships, in particular the *S.S. Carpathia*. Phillips died of exposure in a lifeboat; Bride survived.<sup>3</sup>

This note will present some of the Marconi wireless messages of April 14. Any kind of work under stress is challenging. In particular stress degrades communications, even when effective communications can mean life or death. Art Botterel<sup>4</sup> once summed it up: "Stress makes you stupid." The only protection is training. As he has also famously said: "In a time of disaster, you will not rise to the occasion, you will sink to your level of training."

In 1912 on the North Atlantic, Marconi ruled the ether. Marconi operators manned each English ship's wireless room. Relays and inter-ship communications were the order of the day. Messages enjoyed precedence, from "routine" on up. After distress (CQD/SOS), a message for a vessel's master had the highest priority, so much so that by protocol it had to be acknowledged by the master. A message for a ship's captain got a prefix of "MSG."

At 7:50 PM the *S.S. Mesaba*, to the West of the *Titanic*, sent a warning specifically to the *Titanic*:

KV-  
6LEE@gmail.com

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"In lat 42N to 41.25N long 49W to long 50.30W saw much heavy pack ice and great number of large icebergs also field ice. Weather good, clear."

The *Mesaba* operator sent this message not with the prefix MSG but with a prefix "Ice report." It never got to Captain Smith. Phil-

Form No. 5-200-1/1/06.  
Forwarding Charges \_\_\_\_\_ Delivered or sent date 14 APR 1912

**SERVICE FORM.**  
**THE MARCONI INTERNATIONAL MARINE COMMUNICATION Co., Ltd.**

Office Rec'd from	Time Rec'd	By whom Received	Office sent to	Time Sent	By whom Sent
	m.		<u>NY</u>	<u>7.50</u> p.m.	<u>Sh.A.</u>

No. 3 / **MESABA** OFFICE 14 APR 1912

Prefix Ice report Code \_\_\_\_\_ Words \_\_\_\_\_

From Mesaba To Titanic

In lat 42N to 41.25N long 49W to long 50.30W saw much heavy pack ice and great number large icebergs also field ice. Weather good, clear

Figure 1, *Mesaba* Marconi "Service Form" record sheet for the message.<sup>5</sup>

lips received but did not send it to the bridge. *He was overwhelmed by routine passenger messages outward to Cape Race station in Newfoundland.*<sup>6</sup>

Phillips, dying of hypothermia in a lifeboat early in the morning of April 15, told the *Titanic's* Second Officer that he had the *Mesaba* message at his elbow under a paperweight in the midst of the rush to send the delayed passenger traffic to Cape Race.<sup>7</sup>

Of course, in perfect hindsight, the *Mesaba* operator erred in not assigning a MSG priority to the message. Secondly, Phillips erred in failing to heed the substance of the message, and thus failing to alert the Captain. But the fundamental error was that of the White Star Line, the *Titanic's* corporate master: pandering to the vanity of First Class passengers wanting the prestige of having sent a "wireless" -- a Marconigram -- from the world's premier steamship, at the risk of the safety of the ship.

The 6:22 PM Marconigram from Charles Norris to a relative shows the nature of the messages that distracted Phillips:

**"Arrive Wednesday Titanic Sent Marconigram Hope you are fine "**

Other steamers also sent the *Titanic* ice warnings. At 7:10 AM on April 14, the *S.S. Caronia*, with the high priority pre x MSG, transmitted:

**To: Captain Titanic West-bound steamers report bergs growlers and field-ice 42 N from 49 to 51 West April 12<sup>th</sup>"**

At 5:35 PM, the *Caronia* sent another message to Captain Smith, but a private one:

**"To: Commander Titanic All best wishes success much love George and Kate Riggs"**

This message (figure 4) was marked MSG. That indication is

MARCONI WIRELESS TELEGRAPH COMPANY OF CANADA, Limited			
MONTREAL			
No. <u>4</u>	CAPE RACE STATION	APR 14 1912	190
Prefix <u>A</u>	Code <u>Litonic</u>	Words <u>10</u>	
Office of Origin			
Service Instructions:			
	Station Rec'd from	Time Rec'd	By whom Rec'd
	<u>M. Gey</u>	<u>6:22</u> m.	<u>Ha</u>
	Stations sent to	Time Sent	By whom sent
	<u>118</u>	<u>6:38</u>	<u>Ha</u>
To <u>Norris Williams 8124 St Martins</u>			
<u>fare Philadelphia</u>			
<u>Arrive Wednesday Titanic</u>			
<u>Sent Marconigram Hope you</u>			
<u>are fine voyage</u>			
<u>Charley</u>			

Figure 2, Received by Canadian Marconi at Cape Race, Newfoundland.

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Form No. 1-100-18.5.11. Sent date 14 APR 1912

**The Marconi International Marine Communication Company, Ltd.**  
WATERGATE HOUSE, YORK BUILDINGS, ADELPHI, LONDON, W.C.

No. 1/1 "CARONIA" OFFICE 14 APR 1912 19\_\_

Prefix MSY Code \_\_\_\_\_ Words 23

Office of Origin "CARONIA"

Service Instructions: Radio

CHARGES TO PAY.		
Marconi Charge ...		
Other Line Charge...		
Delivery Charge ...		
Total . . .		
Office sent to	Time sent	By whom sent
<u>MSY</u>	<u>7/10</u> p.m.	<u>RL</u>

PLEASE ASK FOR OFFICIAL RECEIPT.  
Code Address registered on 7 with Cable Companies are not available for messages through British Post Office Stations.

READ THE CONDITIONS PRINTED ON THE BACK OF THE FORM.

To: Captain Titanic

<u>Westbound</u>	<u>steamers</u>	<u>report</u>	<u>bergs</u>	<u>growlers</u>
<u>and</u>	<u>field-ice</u>	<u>in</u>	<u>42 N</u>	<u>from</u>
<u>H9 to</u>	<u>51 West</u>	<u>April</u>	<u>12<sup>th</sup></u>	
			<u>bergs</u>	<u>Bar.</u>

CONTINENTAL BROS., Printers, etc., Limehouse, E.

Figure 3, the Caronia's message number 1/1, likely the first of the day. From this and other ice warnings, Captain Smith had notice of the risk. But the White Star Line wanted a fast crossing, perhaps a record.

Form No. 1-100-17.11.11. Sent date 14 APR 1912

**The Marconi International Marine Communication Company, Ltd.**  
WATERGATE HOUSE, YORK BUILDINGS, ADELPHI, LONDON, W.C.

No. 4/4 "CARONIA" OFFICE 14 APR 1912 19\_\_

Prefix MSY Code \_\_\_\_\_ Words 18

Office of Origin "CARONIA"

Service Instructions: radio

CHARGES TO PAY.		
Marconi Charge ...		
Other Line Charge...		
Delivery Charge ...		
Total . . .		
Office sent to	Time sent	By whom sent
<u>MSY</u>	<u>5-55</u> p.m.	<u>W.E.H</u>

PLEASE ASK FOR OFFICIAL RECEIPT.  
Code Address registered only with C.C. in Companies are not available for messages through British Post Office Stations.

READ THE CONDITIONS PRINTED ON THE BACK OF THE FORM.

To: Commander Titanic  
Steamship

<u>all</u>	<u>best</u>	<u>wishes</u>	<u>success</u>	<u>much</u>
<u>love</u>	<u>George</u>	<u>and</u>	<u>Kate</u>	<u>Riggs.</u>

CONTINENTAL BROS., Printers, etc., Limehouse, E.

Figure 4. Private message from the Caronia to "Commander Titanic".

crossed out on the *Caronia's* record copy but there is no way to know if the prefix went out with the message. This sort of incoming message also distracts from attention to possibly more important traffic and degrades situational awareness, both on the wireless operator's part and that of the Captain.

Late in the evening of April 14, the nearby *S.S. California*<sup>1</sup> also tried to send an ice warning, but like the *Mesaba's*, it was not prefixed with MSG for Captain Smith's attention. Phillips, working hard to get delayed passenger traffic out to Cape Race, cut it off: "Keep out, I'm working Cape Race."<sup>8</sup> So the single wireless operator on the *California*, after a long day, shut down and went to sleep.

One can only speculate as to whether the *Mesaba's* message, or the *California's* message, had either reached Captain Smith, would have slowed him down. With more confidence, however,

albeit in hindsight, one can say that ice warnings should have been prefixed MSG. The Marconi company should have trained its operators to do so. With even more confidence one can say it was a failure on the Marconi company's part, as of 1912, not to train its operators to rate life-safety outbound traffic, however designated, above routine messages. Similarly, one can say that the Marconi company failed to train at least some of its operators to think life-safety in evaluating incoming traffic, whatever its prefix.<sup>9</sup>

With complete confidence, one can say that the Marconi company and the White Star Line bear the blame for overwhelming the second most important man on the ship that night, the Marconi wireless operator on duty, with a flood of the routine in which not even icebergs were noticed.

See Figure 5 for an image of the first CQD-SOS message Phillips sent out a few hours later, just before midnight, as copied on the

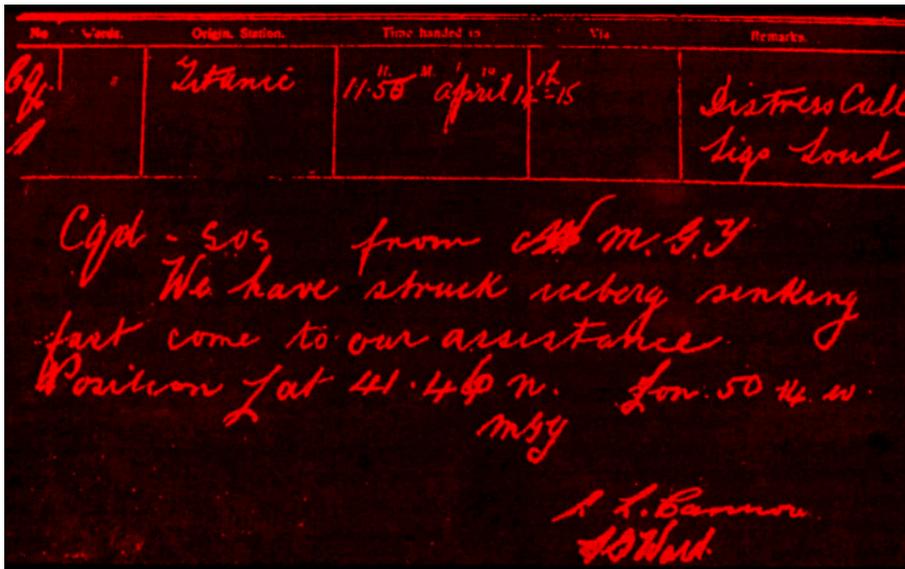


Figure 5. CQD sent from the *Titanic* at 11:55 and copied on the *Birma*.

S.S. Birma.<sup>10</sup>

## ENDNOTES

- 1 The best recent explanation of the *Titanic* disaster is: *Unseen Titanic* in National Geographic, April 2012 at page 78 and cover (“Titanic What Really Happened”), including Hampton Sides, “The lights are finally on” at page 86, “Titanic The Crash Scene” at page 99, and James Cameron, “Ghostwalking in Titanic” at page 100. Cameron reports: “We even imaged the transformer they [Phillips and Bride] had repaired just the night before the sinking. Acting against guidelines, the two wireless geeks managed to restore the set to full power – an act that may have saved 712 lives, since without this power they might not have reached the rescue ship *Carpathia* with their historic SOS.” (Page 109). Cameron also saw that “the wireless apparatus survives” and that the positions of the knife switches revealed that the operators had cut the power as they left the flooding radio room.
- 2 See Richard Patton, Commander, USCGR (Ret.), *Radio’s Role in the Titanic Disaster*, QST, April 2012, page 30. See also the *Titanic* website: [www.rf.ro](http://www.rf.ro) that displays excellent graphics and summarizes much of the story of related wireless operations. (The URL is a pun, RF being Radio Frequency and RO being Radio Operator).
- 3 Survivors of the trauma of the *Titanic*’s sinking have fascinated the public. See, e.g., Andrew Wilson, *Shadow of the Titanic*, Smithsonian, March 2012 at page 32, featuring a striking image of the slowly sinking ship, a painting by Robert G. Lloyd.
- 4 [www.incident.com](http://www.incident.com). Mr. Botterel has recently suggested that 500 KHz, the old marine distress and calling frequency at 600 meters, would be ideal for a ground-wave, state-of-the-art high technology global warning system.
- 5 The images of the several

wireless messages derive from the Titanic Signals Archive Collection, Westbury, Wiltshire (UK), reproduced as postcards by Marine Art Posters (Hull, UK) in its Series 8. This one is number 6 of 16. The Norris message is number 3. The *Caronia* ice warning “MSG” is number 4 and the *Caronia* personal message to the *Titanic*’s master is number 2. I obtained these cards at the Titanic Museum in Cobh, Ireland (near Cork), which as “Queenstown” before Irish independence, was the *Titanic*’s last port of call before its first and last North Atlantic voyage. The Posters company has not responded to an inquiry about further availability.

- 6 One of the most perceptive analyses of the wireless operations that night is that of David Barlow, G3PLE, (the Curator of the Lizard Point, Cornwall, U.K. Marconi Wireless station) in an excerpt from in his book: *SOS – A Titanic Misconception*. The excerpt, *Wireless Communications and the Titanic Disaster*, appears in the Poldhu Amateur Radio Club GB2GM Newsletter, March 2012 at page 7. He notes that the *Titanic* received at least seven ice warnings. He reproduces the CQD – SOS message from the *Titanic* copied by the *S.S. Birma* just before midnight (figure 5 here).
- 7 Patton, above, at p. 31.
- 8 See the *Titanic* website: [www.rf.ro](http://www.rf.ro). See also David Barlow, above: “Keep out” was not rude, just a shorthand expression by a harried operator.
- 9 The wireless operator on the *Carpathia*, Harold Cottam, took the *Titanic*’s CQD-SOS message to the watch officers, who proposed to ignore it, so he broke protocol and personally awoke the Captain, Arthur Rostron, who sped his ship to the *Titanic* despite the ice. See John Dilks, K2TQN, *An Operator to Remember*, QST (Vintage Radio column), April 2012, page 93.
- 10 From Barlow, above, p. 1.