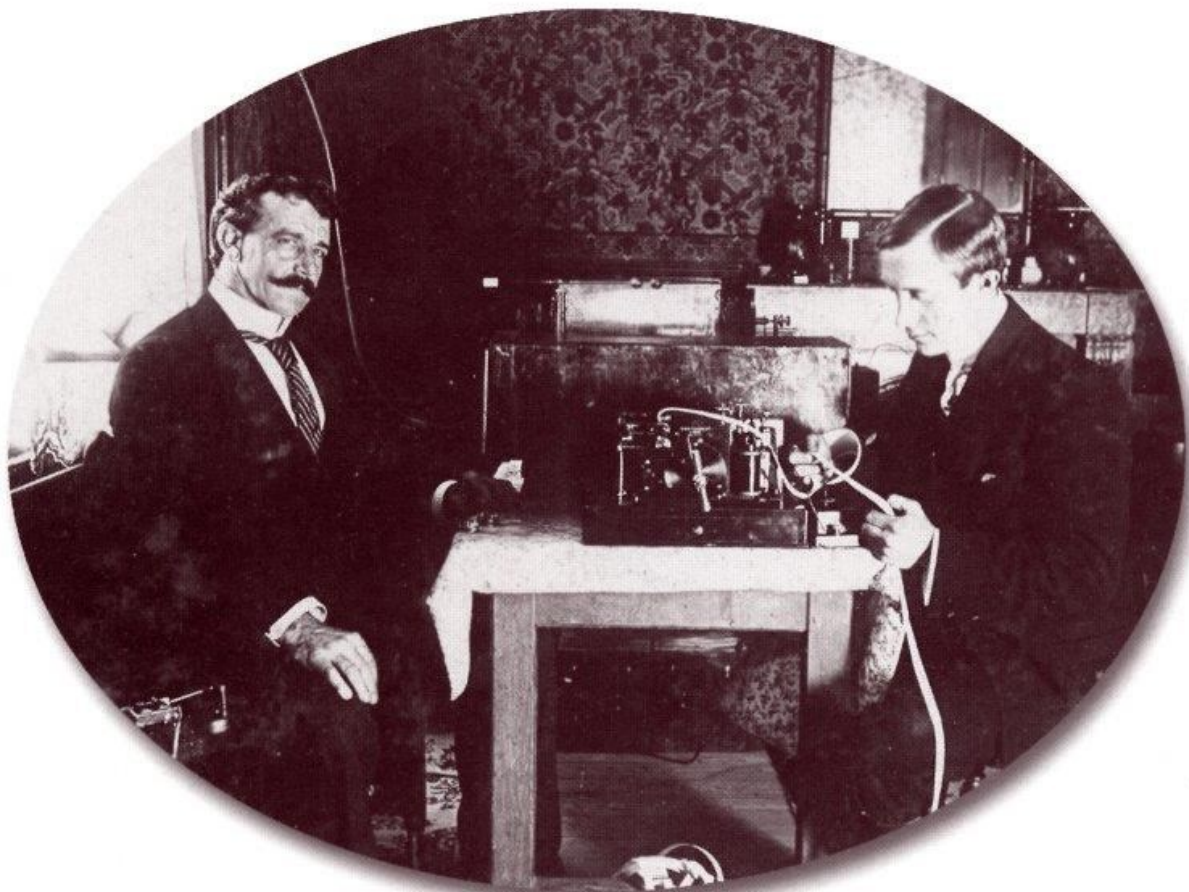


Marconi Centenaries in

1999



G&C

Marconi Centenaries in

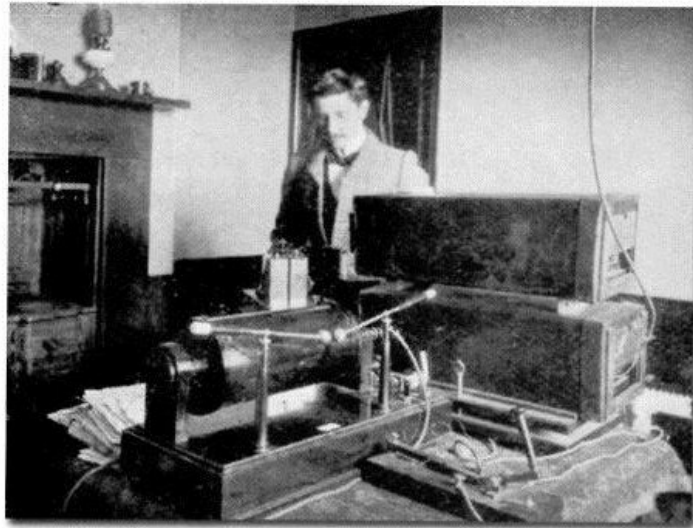
1999

<i>Setting the Scene</i>	I
<i>The First Use of Wireless as an Aid to Ships in Distress</i>	2
<i>The First Wireless Messages Across the English Channel</i>	6
<i>The First Use of Wireless in War</i>	9
<i>The First Use of Wireless to Produce a Newspaper at Sea</i>	13
<i>Acknowledgements</i>	16

Front cover shows Marconi at his Wimereux Station with his assistant George Kemp. 1899.

Setting the Scene

By the last years of the 19th Century the Corporation of Trinity House had long needed some system of signalling with their off-shore establishments. Two



Marconi's apparatus at the South Foreland Lighthouse, 1898.

methods had been tried and found lacking. The first was by cable connections but these were under a constant strain when the lightships were anchored in open sea

and frequently came into contact with the hawsers of the vessels. The second was the Post Office inductive system and this also proved unsatisfactory. So seeing an opportunity Marconi's Company offered ship-to-shore demonstrations by wireless telegraphy. The Elder Brethren of Trinity House accepted this offer and selected to link, for a trial period, the twelve miles between the South Foreland Lighthouse and the East Goodwin Lightship.

The installations were completed in December 1898 and two-way communications established on Christmas Eve. George Kemp, Marconi's assistant, who was operating the East Goodwin Station, recalls in his diary some of the messages he sent for onward transmission by telegraph. For instance he sent compliments of the season to all the editors of the leading newspapers and to all friends and relations of the lightship's crew and the Wireless Telegraph staff.

*The First Use of Wireless as an
Aid to Ships in Distress*

On Saturday the 11th March, 1899, the first practical use of this link between the East Goodwin Lightship and the South Foreland Lighthouse was made. The occasion was a ship going aground. The three masted sailing ship 'Elbe' was laden with slates from Nantes and returning to its home port of Hamburg. It went ashore on the Goodwin Sands at 2 in the morning, a thick fog prevailing at the time. The South Goodwin Lightship fired signals. It often happened that when the wind was blowing off-shore the signal guns of the lightships could not be heard on land. However, in this case the signals were heard by the East Goodwin Lightship. It communicated by wireless telegraphy to the South Foreland Lighthouse and from there telegraphic messages were sent to the authorities. The lifeboats at Ramsgate, Deal, and Kingsdown were not launched but

they were all standing by. As it happened the 'Elbe' was able to re-float eight hours later with the assistance of boatmen and with the tug 'Shamrock' in attendance. But it was the first occasion in the history of the world in which lifeboats had been alerted by the means of wireless.

By a strange coincidence the East Goodwin Lightship was itself involved in a collision at sea with a steamer, 'R.F. Matthews', 1964 tons, of London, sailing from the Tyne with coal for Genoa. It happened shortly after the 'Elbe' incident on the 28th April 1899 and use of wireless helped to avert a situation that might have involved the loss of life.

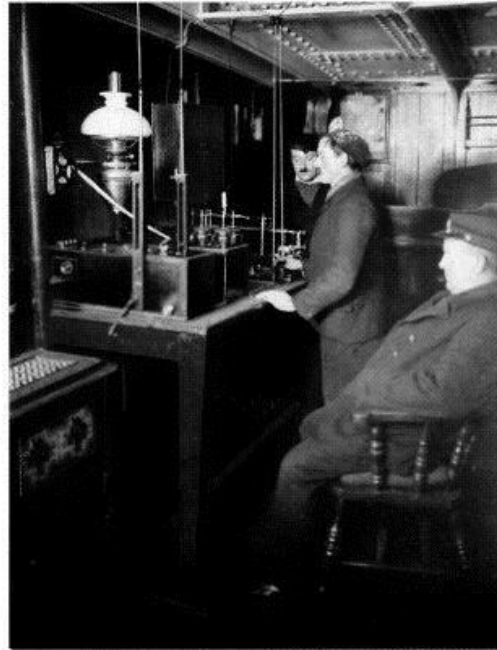
Although a lightship is moored it is still capable of some movement as its cables allow it some change of position if the rudder is used. On the day in question there was very dense fog in the Channel. The evidence is that the approach of the steamer was noticed, the helm was put



The East Goodwin Lightship, 1898.

down and the lightship was swung by the tide. Even so she was struck and sustained some damage. Using the wireless telegraphy from the lightship to the shore, Capt. Clayson, the master of the lightship, later described the incident to a reporter:

"We number seven hands all told. Fortunately none of us were hurt, but we all had a very severe shaking. There was a very dense fog when the collision occurred, and we had a very narrow escape from being cut in two, as the vessel nearly caught us broadside on. We had just time to put our helm down, and let the tide swing the ship a bit; otherwise the steamer must have run right through us. As it was, she gave us a violent glancing blow across the bows. Our stem is completely smashed down to the water line,



*Marconi's wireless cabin on board the
Tongue Lightship, 1900.*

and the covering boards and plank-ends on each side of the stem are started (damaged). The ship hung to us, and our vessel scraped along one side of the steamer, giving us a severe grinding, and carrying away our upper works and plating above water. The ship is very badly damaged, and but for the fact that the sea was calm and has remained calm since, we could not have kept afloat. The steamer remained alongside to see if we required assistance, and subsequently proceeded down the Channel, having

sustained damage herself. Before the steamer left we told the captain we had telegraphed to the South Foreland, and they had promised to send aid if we required it. The cause of the vessel running into us was that she did not make sufficient allowance for the tide, which was running very

1999

strong at the time. The lightship is so badly damaged that she must be replaced, and we are waiting for the Trinity boat Warden, which is on her way up Channel from Beachy Head, with the superintendent on board. She is to bring with her another lightship to replace us, and tow us back."

Capt. Clayson was asked if he had had any difficulty in getting communication with the South Foreland Lighthouse after the accident happened. He replied:

"I had not the slightest trouble. The collision occurred at half-past eight. I called the South Foreland up about two minutes after the steamer got clear of us, and while she was still standing by; and I got the reply immediately from Mr Bullocke, to whom I telegraphed briefly the particulars of the collision."

Mr Bullocke, Marconi's assistant, was on the premises at South Foreland Lighthouse when he heard the alarm

bell ringing. He realised it was the lightship communicating and later reported that he had received the following message:

"We have just been run into by the steamer 'R.F. Matthews', of London. Steamship is standing by us. Our bows are very badly damaged."

The newspaper accounts reported that he immediately transmitted the message to the Trinity House authorities at Ramsgate and it was further arranged that if the lightship required immediate assistance the lighthouse people would telephone to Ramsgate, Deal, and Kingsdown for the lifeboats to be sent out.

It is strange that despite a verbatim account by the Captain, reported in many newspapers, Trinity House stated a few days later that the collision with the steamer had only caused slight damage. The truth of what actually happened can never be finally resolved as

the definitive papers were destroyed in the blitz. Although the lifeboats were not needed, the wireless link with the shore had enabled the Trinity House rescue ship to set out much more quickly than would otherwise have been the case.

The significance and immense importance of what happened did not escape the people involved at the time. Here was a system that enabled a vessel in distress to communicate with the shore. At that time messages could only cover a short distance but as a naval correspondent then wrote about the future of wireless in 'The Morning Post',

"its potentialities are infinite, but in regard to long distances it still remains to translate these potentialities into definite facts." They soon would be.

The First Wireless Messages Across the English Channel

While these exciting events were taking place between ship and shore, another role' was being planned for the South Foreland Station. With the agreement of the French Government a wireless station was set up at Wimereux, near

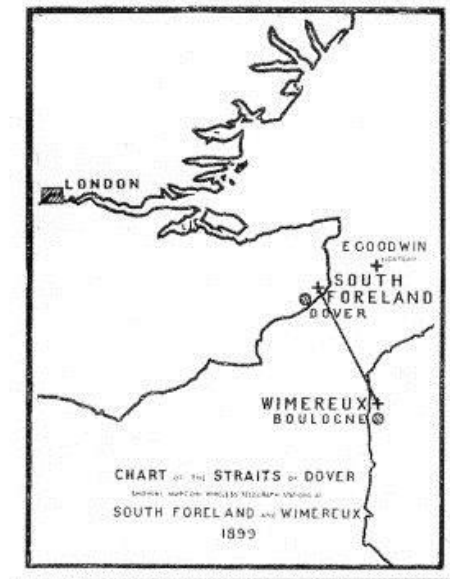
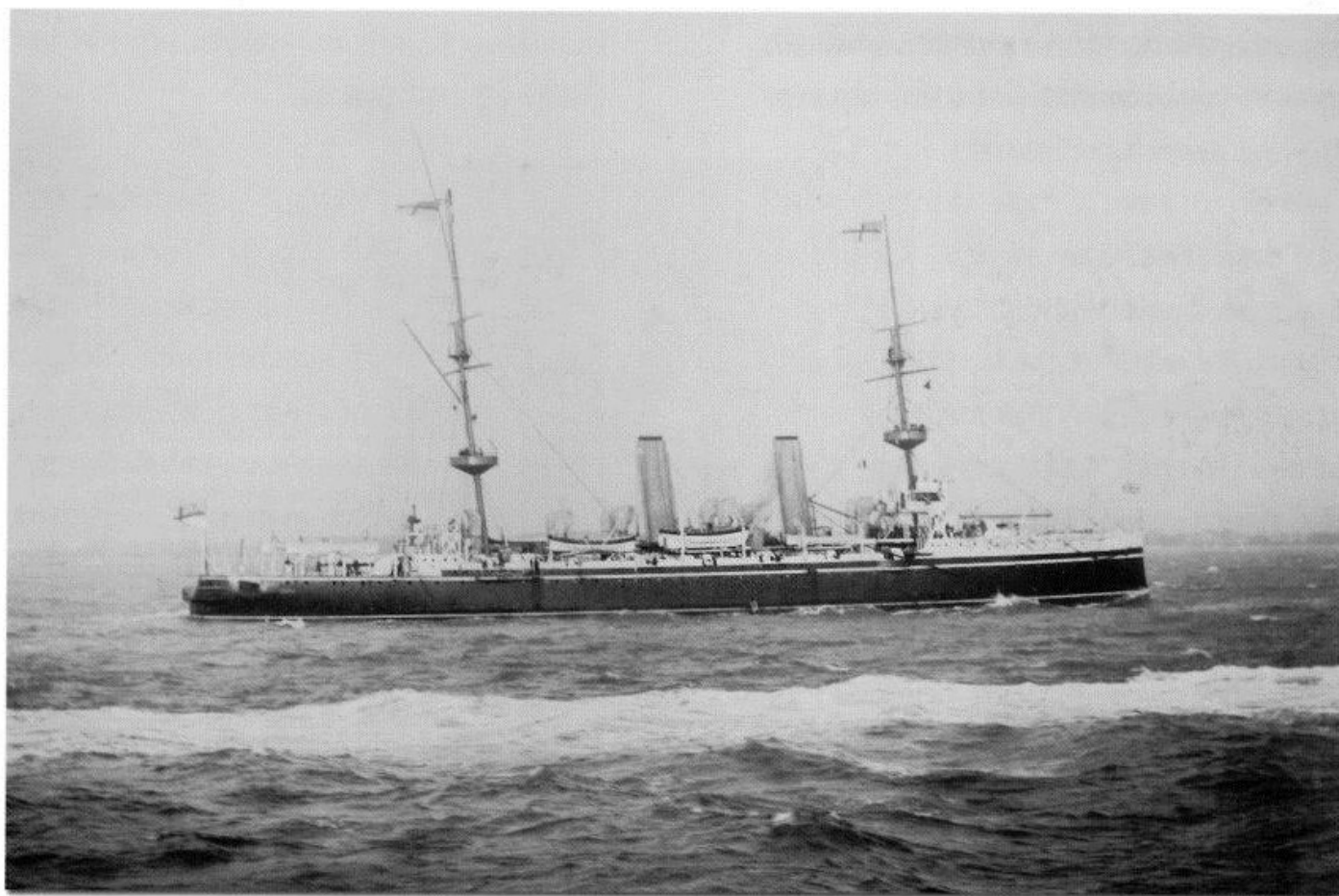


Chart of the Straits of Dover. 1899.

Boulogne. On the 27th March, 1899, messages were sent from Wimereux to the South Foreland Station, a distance of over 30 miles and replies were received.



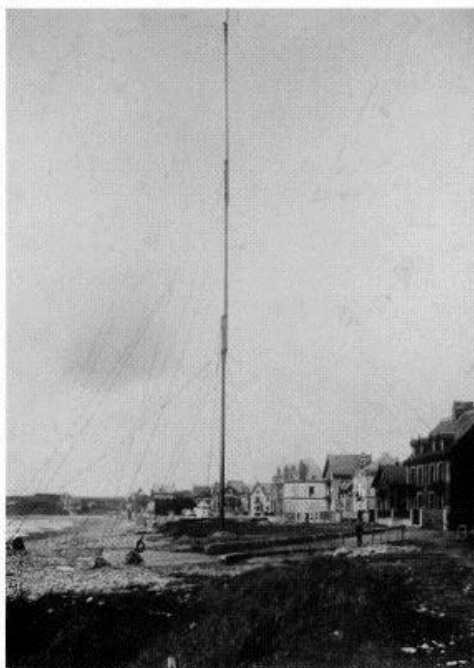
HMS 'Juno' during the British Naval Manoeuvres, 1899.

According to a newspaper report on the 29th March, 1899, "messages passed backwards and forwards with the greatest care and quickness." It was the first use of wireless, both ways, across the Channel.

Following on from this, the French Government appointed naval and military officers to make tests between the land and French warships. The officers showed great enthusiasm and the tests were carried out for several weeks. The aerial height on the ships was about 100 feet and the maximum distance obtained at that time was 42 miles.

Perhaps stimulated with the success of these trials, even more complete tests at sea were carried out in the British Naval Manoeuvres in July 1899. Three ships of the 'B' fleet were fitted with wireless apparatus, the flagship 'Alexandra' and the cruisers 'Juno' and 'Europe'. Marconi himself was

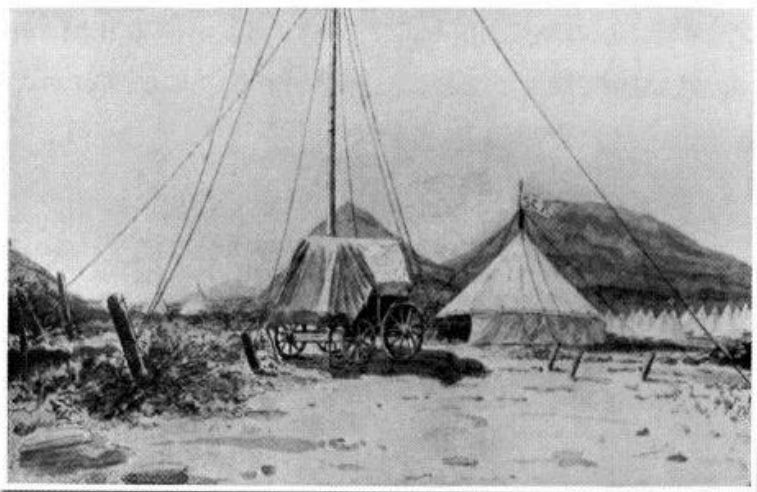
on the 'Juno' as he was a friend of the Captain (Jackson, later Admiral Sir Henry Jackson) who had some previous experience with wireless.



Marconi's aerial at his Wimereux Station, 1899.

The 'Juno' was accompanied by a small squadron of cruisers. The flagship transmitted messages by wireless to the 'Juno' and these were transmitted by the old methods of flags or semaphore on to the ships around her. But by so doing a revolution in naval manoeuvres had been made possible, as orders could be received from the flagship even when it was out of sight. In these experiments the messages sent, were, 60 nautical miles from the 'Europe' to the 'Juno' and 45 miles from the 'Juno' to the 'Alexandra'. Greater distances could sometimes be obtained but these

were the distances established for reliable transmission, no matter what the weather conditions.



A sketch of the camp at Enslin by Dowsett of the Marconi Company, showing the bamboo mast and instrument wagon, 1899.

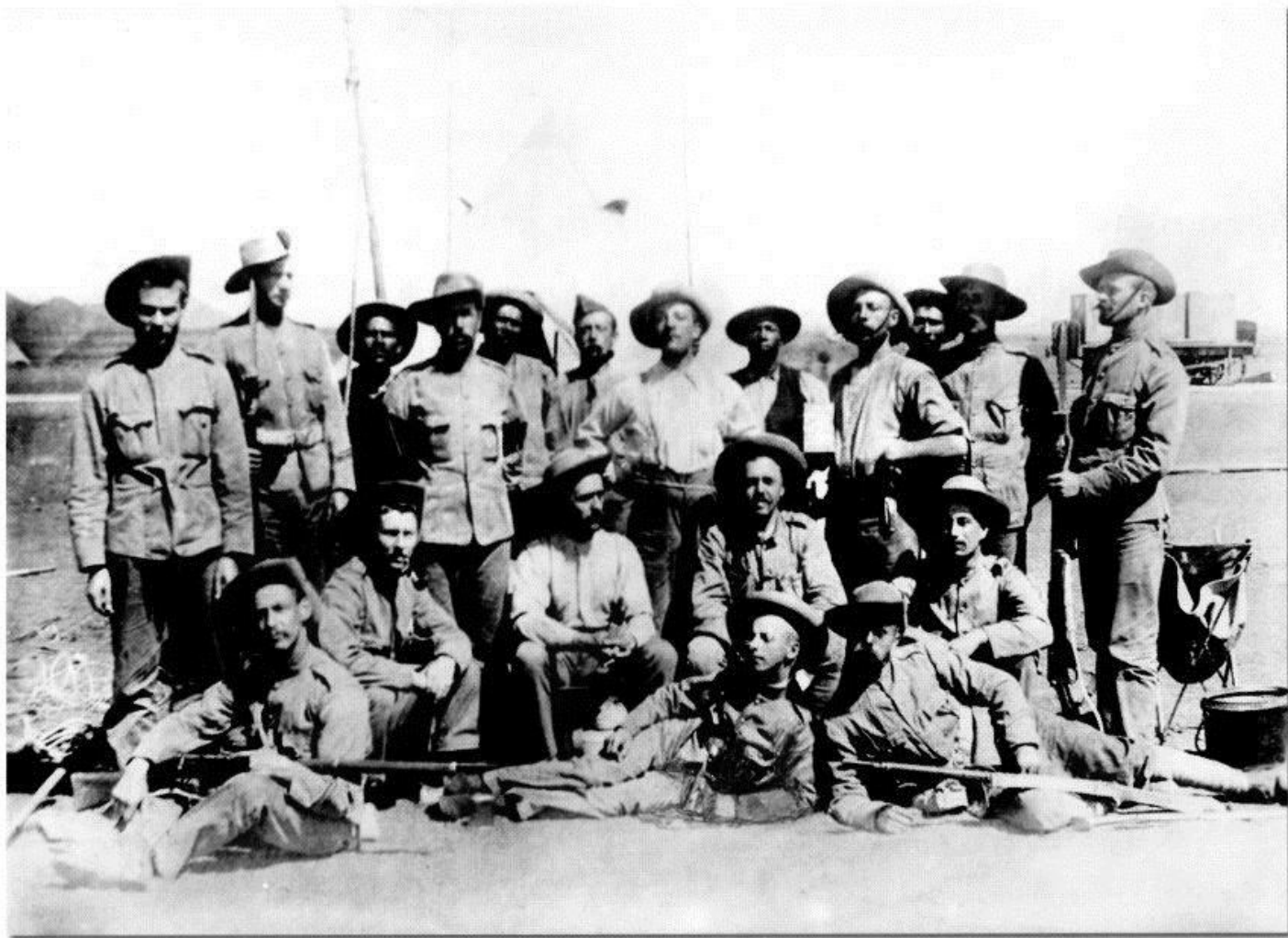
The First Use of Wireless in War

The Boer War was the first conflict in the world in which wireless played any part. As it turned out it proved to be useful at sea but ineffective on land.

The war began on the 11th October 1899, and by the 14th October 3 Divisions of troops were dispatched from England to reinforce those already there. No doubt

because of the successful experiments in wireless carried out in the naval manoeuvres in July 1899, it was thought wireless would be useful in naval operations, so 6 engineers from the Marconi Company were also sent, together with 5 sets of wireless telegraphy equipment. It is interesting that the Boers were also thinking of using wireless and President Kruger had ordered wireless equipment from Siemens. But this arrived too late for them and was impounded by the British authorities at Cape Town.

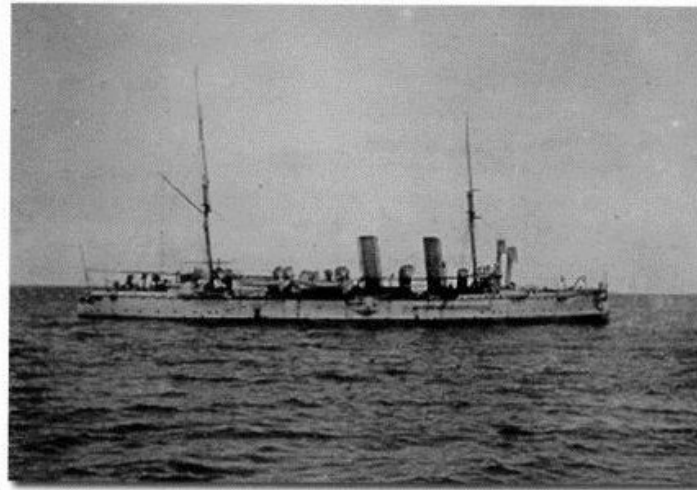
The British engineers with their wireless equipment arrived in South Africa on the 24th November, 1899, and the senior engineer, Bullocke, demonstrated it to the General in Charge and his staff. As a result it was decided, despite previous intentions, that an attempt would be made to use wireless on land. The sets were sent to De Aar, a large railway junction, where one set remained, and from there to sites along the Kimberley line at Modder River, Belmont and Orange River. A fifth



Marconi Company engineers and Royal Engineers in South Africa, 1899.

was sent to Graspan (Enslin), 25 miles from the Modder River site, where it was thought General Methuen might be subject to a surprise attack. But initial attempts at communication failed. Bullocke, himself, failed to communicate between De Aar and Orange River, a distance of 70 miles, even though he had a 50 foot aerial and a good earth. However, communications did prove possible if the aerial wires were kite-supported.

For about six weeks various attempts were made to communicate by wireless on land but the stations were unserviceable for half this period. On the 12th February 1900, the Director of Army Telegraphs issued orders to dismantle the sets on the Kimberley line and the rest soon followed.



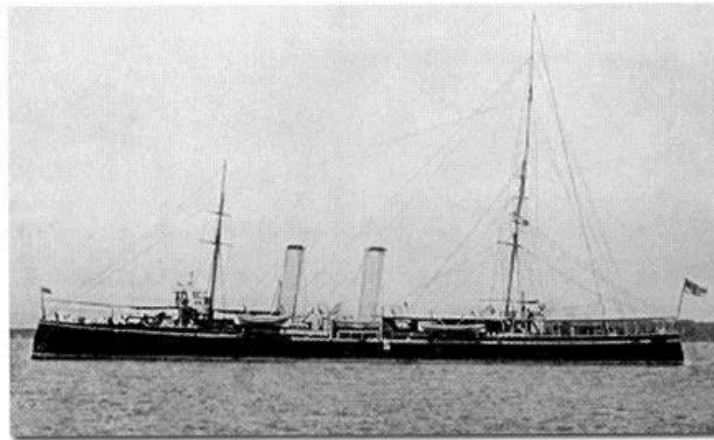
HMS 'Magicienne' in the Delagoa Bay, c. 1900.

There were a number of reasons for the failure of wireless on land. The most important was probably the lack of adequate aerials. The sets supplied by Marconi were the 'plain aerial' working type and any pair operating together were very dependent on them both having a similar height of aerial. However, the normal poles used to support the aerial wires were too bulky for use in the field, so attempts were made to replace these by bamboo poles or by wires attached to balloons or kites. The former were too short and the latter largely unuseable because of the wind. Then, too, the climate of the veldt was not favourable. There were frequent thunderstorms, especially, at that time of year, and these overwhelmed the coherers, essential to the apparatus. Another factor

may have been the geology of the land and the inability to establish good earths.

However, on sea the experience was quite different. The experiments with wireless in the naval manoeuvres of the summer of 1899 had been very successful and knowledge of these provided a favourable atmosphere for the use of wireless in South Africa. The 6 Marconi Company engineers were transferred to the Delagoa Bay Squadron and 3 of the wireless sets were first installed on the cruisers HMS 'Forte', 'Magicienne', and 'Thetis'. Here they proved very useful. A wide area of search could be covered in concerted action while the ships were out of view of each other and the quarry. More than this, prompt indirect communication could be maintained

with the Commander-in-Chief at Simon's Town. The 'Magicienne' was at anchor in the Delagoa Bay. The ships at sea could send her messages by wireless. These were then sent by a cable connection to the shore and from there by telegraph to the Cape.

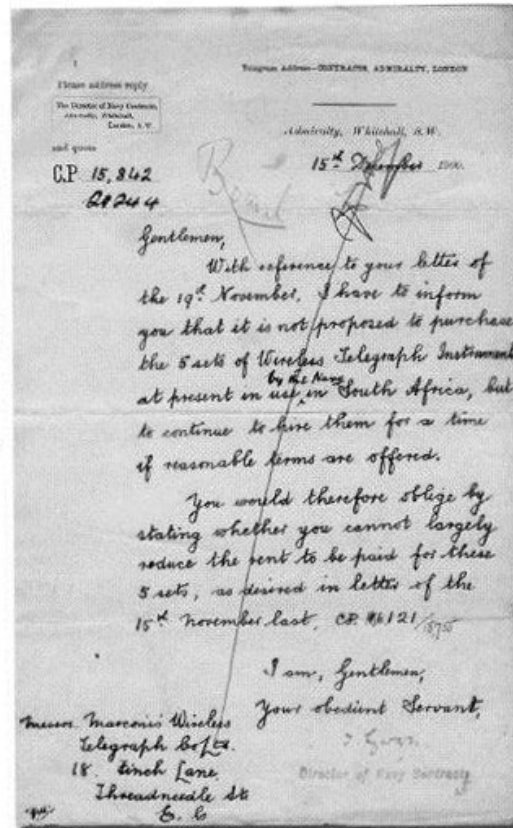


HMS 'Thetis' in the Delagoa Bay, 1900.

The great difference between land and sea use of wireless was that masts of ships could be extended to sustain long aerial wires. That on the 'Thetis', for example, extended above the water line by 143 feet. This vessel was in fact the first naval ship, active in a theatre of war, to be equipped with wireless.

Later an experimental horizontal twin-wire aerial was fitted on the 'Thetis', and this became standard for naval vessels. Ranges of transmissions of 50 miles or more were obtained.

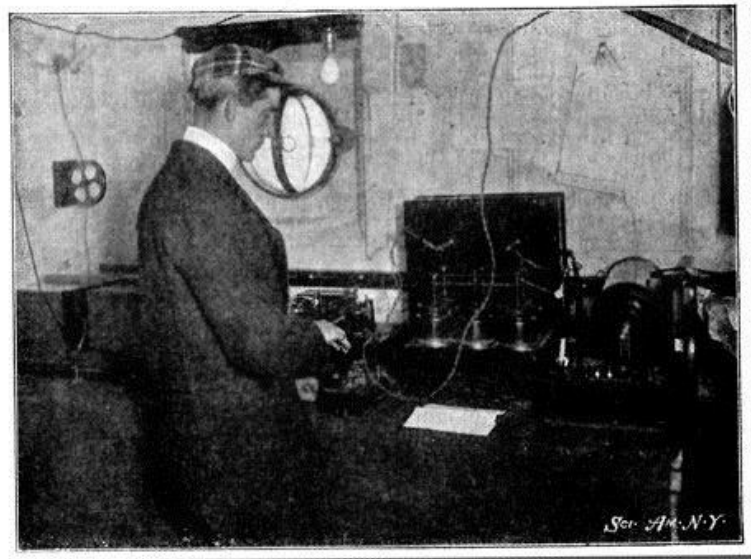
Such was the success of wireless at sea that the Admiralty placed a contract with the Marconi Company to provide and install equipment on board 26 Royal Navy ships and at 6 Admiralty coastal stations in the summer of 1900. In addition, the Navy continued to hire the Boer War apparatus.



Admiralty letter, 1900.

The First Use of Wireless to Produce a Newspaper at Sea

When the Boer War broke out in October 1899 Marconi was in the USA and preparing shortly to return to England on the SS 'St Paul'. The officers of the American shipping line, knowing of the wireless transmitting station at the Royal Needles Hotel on the Isle of Wight, suggested to Marconi that it would be a good idea if news, especially war news, could reach the ship before it reached Southampton. Marconi, always ready for new experiments, cabled his firm in London to prepare for this. Major S. Flood-Page, the Managing Director of the Marconi Company, and Mr. Jameson-Davis went down to the Isle of Wight and arrived at the Royal Needles Hotel on a Tuesday evening. The SS 'St Paul' was expected to arrive within transmission distance early on the Wednesday morning the 15th November. Just in case it arrived earlier an assistant kept watch all night but no signal was received. Nor did the ship arrive as



*Marconi's apparatus on board the SS 'St Paul'.
15 th November 1899.*

early in the morning as was expected but at 1.50pm the first signal was received from the Needles. The ship was 66 miles away. It must have replied because at 2.40pm came the message "*Was that you 'St Paul'?*" and at 2.50pm the further message "*Hurrah! Welcome Home. Where are you'?*". By then the ship was about 50 miles away.

The ship was travelling at 20 knots and it must have been in an atmosphere of great excitement that news was received on board, especially news of the war. There were such messages as:

"Ladysmith, Kimberley, and Mafeking holding out well. No big battle. 15,000 men recently landed".

"At Ladysmith no more killed. Bombardment at Kimberley effected the destruction of ONE TIN POT. It was auctioned for £200. It is felt that period of anxiety and strain is over, and that our turn has come".

It was the idea of the captain of the ship, Captain Jamison, that these war messages should be preserved and printed in the first edition of a new ship's paper. '*The Transatlantic Times*', Volume I, Number I. These were sold at a dollar a copy with the proceeds going to the Seaman's Fund. Marconi himself was pleased to autograph the copies.

AMERICAN LINE

New York-Southampton

S. S. "ST PAUL"

Sailing from New York
Wednesday, November 8, 1899, at 10.00 A. M.

Captain JOHN C. JAMISON

Purser—R. D. WILLIAMS Surgeon—RICHARD Wm. BISHOPPOWELL
Chief Steward—WALTER HARRIS

<p>Mr. Charles J. Allen Mrs. Paul Bartlett Captain G. L. Bousley Mrs. H. J. Bousley Mrs. Bennett Mr. R. T. Mitchell Mrs. Dickson Mr. A. J. Bault Mr. Rowden Mr. Bradford Mr. W. Sanderson Brown Mr. J. Busset</p> <p>Mr. W. M. Calhoun Mrs. J. Donald Cameron and maid Miss Cameron Mr. C. S. Cox Mr. Crowther Mr. J. O. Curtis</p>	<p>Miss Dorothy Dalton Miss Dalmas Miss Day Mr. Jacques De Foyere Mr. Louchard</p> <p>Mr. G. C. Flint</p> <p>Mr. John Garwood Mrs. Garwood Mr. W. K. George Mrs. George Mr. J. C. Green Mr. Charles A. J. Gunning</p> <p>Mr. Dudley Hal Mr. John H. H. Mr. Ashton Hill Mrs. Henry A.</p>
---	--

<p>Hon. John N. Irwin Envoxy Extraordinary and Minister Plenipotentiary of United States to Portugal.</p> <p>Mrs. Irwin Miss Alice Irwin Miss Elizabeth Irwin Master Jack Irwin</p> <p>Mr. William F. Jones Mrs. John F. Jones Miss Alice Jones Miss Marion Jones Miss Georgia F. Jones</p> <p>Miss Kingschurch Miss E. Kingschurch Mr. C. A. Kilmbridge Mr. A. D. Kialer Mr. Stuart Knott Lieut. N. H. Kolosnoff, I.R.N.</p> <p>Mr. Harry C. Lee Mrs. Lee and two children Mrs. Raymond Lasher and maid.</p> <p>Mr. Guglielmo Marconi Mrs. J. Fanning Melle and maid Mrs. J. A. Meyer Mrs. Muscoe Miss Muscoe</p>	<p>Mr. W. W. Reid Mr. Richard Mrs. M. Kidout Mr. Irving Koose Miss Blanche Ruby</p> <p>Mr. Walter Scott Mr. H. M. Sears Mrs. Sears Miss Sears Miss Phyllis Sears and two sons Mr. B. P. Steiman Mrs. Frances Stubbs Mr. J. Russell Sullivan</p> <p>Miss Florence Thopp Mr. J. Treherly</p> <p>Mr. David Vander Straeten Miss Margaret Van Tassel</p> <p>Mr. H. Wade Mr. John E. Willett Miss Willett Mr. Hanson L. Withers Mr. L. Wolff Mrs. Caleb Wood, Jr. Miss Naomi Wood Dr. Laura M. Wright Mr. Alexander Wylie</p>
--	--

Master Roland Zehner

Saloon Passenger List

INTERNATIONAL NAVIGATION COMPANY.



AMERICAN LINE  RED STAR LINE 

Front cover of SS 'St Paul' passenger list.

List of saloon passengers that embarked on the SS 'St. Paul', 8th November 1899.

THE TRANSATLANTIC TIMES.

VOLUME I. NUMBER I.

PUBLISHED BY THE TRANSLANTIC TIMES

Published on board the "St. Paul" at Southampton, England, on Wednesday, November 8th, 1899.

Chief Editor: Mr. J. C. Jamison

Editor: Mr. W. W. Reid

Business Manager: Mr. R. D. Williams

Printed by the "St. Paul" at Southampton, England.

Subscription prices: 6d. per copy, 1s. per annum in advance.

Advertisements: 10s. per line per week.

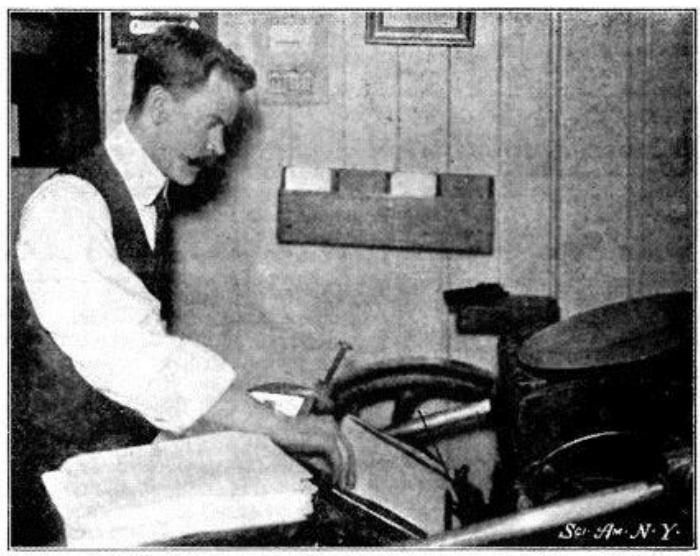
Entered as second-class matter, November 8, 1899, at Southampton, England.

Postage paid at Southampton, England.

Copyright, 1899, by The Transatlantic Times.

'The Transatlantic Times' Volume I, Number I.

It was the first time in the history of the world that a newspaper had been issued on board a ship, before it reached its destination, containing world news that had been received by wireless. It also pointed to a time, soon to arrive, when passengers on a ship would be able to maintain constant contact with the land they were leaving and with the land they were heading for.



The hand press used to produce the 'Transatlantic Times' Volume I, Number 1 on board the SS 'St Paul', 15th November 1899.

Acknowledgements

The Marconi Archives are the main source of the rare information and illustrations in this publication.

The design of this production is by Simon Granger and the scans by John Carter and Malcolm Walker, all from the Image Technology Department of Marconi Research Centre.

The text, selection of images, and captions are by Gordon Bussey, GEC Historical Consultant.



Produced by GEC. ©1999. The General Electric Company, p.l.c.

MARCONI
COMMUNICATIONS