

**Struggling for Survival or Building an Empire?  
The Great Northern Telegraph Company 1945-1970**

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July 2001

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EBHA Conference in Oslo 2001  
C4: Organisational Capabilities

## **Struggling for Survival or Building an Empire?**

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The aim of this paper is to elucidate the development of a major Danish private company - The Great Northern Telegraph Company - from 1945 to 1970. The paper will focus on the change from the old, traditional telegraph company to the gradual emergence of an industrial empire. As I will try to illustrate in the conclusion, this change - or rather the supplementing - of core business interests was a difficult transition in which the “golden age” prior to 1945 played an important role.

### **A Traditional Telegraph Company 1869-1945**

The Great Northern Telegraph Company (GNTC) was founded in June 1869. Its foundation was a result of a merger between three recently established telegraph companies and was initiated by the famous industrial mogul C.F. Tietgen. Tietgen was the leading person behind a wave of mergers in Denmark in the 1870s and 1880s. This concentration of businesses led to the foundation of some of the biggest and most important Danish enterprises of the 20<sup>th</sup> century.<sup>1</sup> GNTC was known to be the pride of Tietgen and the philosophy of the firm was ambitious: to create a worldwide telegraph company.

From the very beginning, the Company held a monopoly on submarine cables connecting the Scandinavian countries with Great Britain in the West and Russia in the East. At the same time, it was providing the two great powers with a direct telegraphic link through Denmark. Based on this key position in northern Europe, the Company managed to expand and build up a telegraph system stretching from Great Britain and France in Western Europe to Japan, China and Hong Kong in the Far East in the course of just a few years.<sup>2</sup>

Inside the firm the Siberian connection was known as the “life-line”, and thanks to the income from the connection to China and Japan the Company amassed a fortune which was unique among the contemporary Danish industrial companies. In 1930, assets held in bonds and cash amounted to DKK 95 million - or around *15 per cent* of the total income to Danish industry that year.<sup>3</sup> In a recent article by the Danish economist Steen Thomsen, the author calculated that Great Northern Telegraph Company was the largest privat limited company in Denmark in 1938, with a share capital of DKK 36 million and assets amounting to DKK 163 million. The second largest company

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<sup>1</sup> Other important mergers in Denmark in the late Nineteenth Century: De forenede Dampskibsselskaber (1866), De forenede Sukkerfabrikker (1872), De forenede Spritfabrikker (1881), De forenede Papirfabrikker (1889).

<sup>2</sup> Kurt Jacobsen: *Diplomacy and International Business*, paper presented at the 2<sup>nd</sup> EBHA conference, Rotterdam, September 1999.

<sup>3</sup> GNTC Archive, Annual accounts 1920 samt Sv. Aage Hansen: *Økonomisk Vækst i Danmark bind II 1914-1975*, p. 243, 1977.

was “De danske Sukkerfabrikker” with a share capital of DKK 22 million and assets totalling DKK 107 million.<sup>4</sup>

Despite their position as the leading Danish enterprise, the Great Northern Telegraph Company faced some difficulties in 1930s. The annual income from telegraphic activities dropped dramatically from around DKK 35 million in the 1920s to around DKK 15 million in the 1930s.<sup>5</sup> There were several important factors behind this. First of all, the international economic crises after the Wall Street crash in 1929 led to less international communication and, consequently, lower income for the telegraph business. Second, the expanding wire-less telegraph became an important competitor, and, third, the political atmosphere was tense with a number of totalitarian states in Europe and the Japanese-Chinese war in 1937. All these factors meant that the income from financial investments in private bonds gradually played a more important role than the income from the traditional telegraph business. The situation became even more difficult after April 1940 when German troops occupied Denmark. All connections to the Company’s offices abroad and international cables were blocked. For five years the activities in the firm were kept at the lowest level which meant that there were no dividends to the stockholders from 1940 to 1945.

In 1943, the Board of Directors attempted to amend the legal status of the firm by diversifying the activities from telegraph services to manufacturing. Not only because of the extremely difficult situation during the war, but also because of the fear of the nationalisation of industries and changes in working environment in peacetime. In a letter to the Ministry of Commerce the managing director - Bent Suenson - described the situation as follows:

“The war has, so to speak, stopped the activities of the Company. All its North Sea cables are blocked, the connection to East Asia is blocked and the activities within East Asia have stopped ... This state means that the countries with concessions will get used to handling their telegraphic traffic without the assistance of the Company after the war...”<sup>6</sup>

After Denmark’s liberation on 5 May 1945, the directors of Great Nordic Telegraph Company faced a very difficult situation. Firstly, they needed to collect information about the state of the firm. Secondly, they had to decide whether to try to rebuild the telegraphic activities despite the difficulties in China and Japan, or if they should rather invest in a new manufacturing business and shift the activities from a falling telegraphic business to new areas. The final option was simply to close the firm and give the fortune from “the golden pre-war years” to the stockholders.

Already in October 1945, a Danish group of stockholders represented by General Consul Olesen suggested the last solution arguing that after five years without dividends it would be reasonable to let the stockholders reinvest the money in other firms.<sup>7</sup>

At a Board meeting on 18 November 1945, the future operational areas of the firm were decided upon but no clear course was mapped out. The Board answered Consul Olesen by arguing that the connections with East Asia had been the most important source of income in the past and, even though the future looked difficult, the Board could not take the responsibility for giving up the efforts to rebuild the connections. In other words, the Board had decided to continue their core business and would even try to re-establish the connections via Siberia to Japan and China. Secondly, the Board decided at the same meeting in November 1945 to intensify its investments in industrial stocks and, at the same time, to try to establish its own manufacturing business in

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<sup>4</sup> Steen Thomsen: *De største danske industrifirmaer 1904-1987*, i *Presse og historie festskrift til Niels Thomsen*, p. 223, 1990.

<sup>5</sup> GNTC Archive, Annual accounts 1920-1939.

<sup>6</sup> GNTC Archive: Memorandum, 2. marts 1943.

<sup>7</sup> GNTC Archive, Minute book of the Board, 20.11.1945, bilag 165.

subsidiaries. The Board was trying to escape liquidation by aiming at both the core business, further investments and new activities.

### **Telegraphic Activities – the core business**

From 1945 until 1950, the telegraphic activities in Great Nordic Telegraph Company were under constant reconstruction and future prospects were gloomy. All negotiations were unsuccessful in China after the civil war and communist revolution in 1949, and the negotiations in Japan were also difficult. Consequently, the Company's income derived primarily from the northern European telegraphic connections. During the first couple of years after 1945, the stockholders accepted that it took some time to rebuild a prosperous business, but when the income from telegraphy was still under DKK 10 million in 1949 (compared to DKK 14.5 million in 1939) their patience was tried very hard. The directors of the Company were attentive to the criticism and the annual report of 1949 included, for the first time, a long description of the financial state and prospects of the company.

Table 1. GNTC annual turnover - telegraphy, capital investments, industry, and expenses<sup>8</sup> (DKK million)

	1946	1950	1955	1960	1965
<b>Income</b>					
Telegraphy	7.3	10.6	16.2	16.6	32.0
Capital investments	4.3	3.6	5.0	6.1	5.8
Diverse income 1.1	0.7	2.3	2.4	1.1	1.1
Production				22.9	47.2
<b>Expenses</b>					
Salary expenses	7.2	7.2	8.2	9.2	
Total expenses	12.7	13.5	18.4	18.7	58.1

Around 1950 the telegraphic market situation became more prosperous. In June 1948, the Company succeeded in opening its Baltic Sea connection from Denmark to Poland, and in December the same year the connection from Europe to Japan was re-established. At the same time, the telegraph administrators at the head office in Copenhagen planned to establish a newly developed coaxial cable across the North Sea. This investment amounted to about DKK 5 million and it proved to be the turning point for the telegraphic activities. As shown in Table 1, the income from telegraphic activities rose from DKK 10.6 million in 1950 to DKK 16.2 million in 1955. It could not compare with the golden age in the 1920s with an annual income of above DKK 30 million, but the rise in income was essential for the survival of the telegraphic strategy of the managers and the Board. Without the increase of about 40 per cent from 1950 to 1955, it would have been extremely difficult to convince the stockholders of the value of a continued interest in the telegraph business. Inspired by the growth in income, the managing director Bent Suenson informed the Board, in February 1954, about a new and very ambitious project – the so-called Scotice-Icecan project developed in co-operation with the British Post Office. It took nine years before the connection from Scotland to Canada via Iceland and Greenland opened in January 1963. Despite problems with many cable breaks because of icebergs and trawling, the new connection produced a substantial rise in income, from DKK 16.6 million in 1960 to DKK 32 million in 1965. The original core business of GNTC had shown its viability. On the other hand, the figures in Table 1 show two remarkable weaknesses in the potential for survival of the telegraphic business: firstly, the annual income never exceeded the current expenses – the surplus was provided by the income from the vital capital investments. Secondly, the growth of the telegraph income from DKK 7.3 million in 1945 to DKK 33.6 million in 1967 was rather low compared to the rapid rise of major industrial companies with large export

<sup>8</sup> GNTC Archive, Annual accounts and Annual general meetings 1946-1967.

revenues in this period. As a consequence, the Company fell from the number one position among the largest Danish privat limited companies in 1938 to number 12 in 1970.<sup>9</sup> This position among the top fifteen was not maintained because of the telegraphic activities but, rather, because of the new industrial subsidiaries. In the long run, these supplementary activities proved to be the “life line” for the old telegraphic company.

### **Investments - Bonds, Property and Stocks, 1945-1970**

By the end of the 1930s, GNTC had developed a strong tradition of financial investments in bonds and the difficult circumstances in the telegraphic market meant that the directors considered investing in manufacturing for the first time in 1938. The result was the acquisition of a 40 per cent holding in the share capital of the leading Danish battery manufacturer A/S Hellesens. During the Second World War the manufacturing business plans were retained but, at the same time, the Company invested more than DKK 20 million in property and about DKK 10 million in industrial stocks in order to spread the risks. By 1948 – after ten years of stock investments - GNTC owned shares in around twenty Danish industrial companies, plus a number of American and English telegraphic and industrial companies. The income from these investments was essential for the total surplus of GNTC in all the annual accounts from 1945 to 1967, as is shown in Table 1. Table 2 shows that the crucial investments changed considerably over the two decades. Bonds went down from comprising about 70 per cent of the portfolio in 1946 to about 25 per cent in 1965, while stocks increased from about 20 per cent in 1946 to about 70 per cent of the portfolio in 1965.<sup>10</sup> These changes reflected a new and more active investment policy in which the directors of GNTC wanted more influence over the money invested via, for example, take-overs and the establishment of new industrial companies.

Table 2. GNTC balance of bonds, stocks, property, bank deposits (DKK million)

	1940	1946	1950	1955	1960	1965	1967
Bonds	78.7	68.9	31.9	35.9	21.3	18.7	17.6
Properties	5.1	11.2	9.6	10.4	7.0	7.9	8.2
Stocks	6.8	20.3	24.8	29.5	37.2	56	58.9
Bank deposits	12.5	12.4	13.6	23.9	41.9	10.5	4.1

### **Industrial manufacturing, 1945-1970**

As mentioned earlier, the strategy of the directors in the difficult situation after 1945 was to restructure the telegraphic activities, to continue the investments mentioned above, particularly in stocks, and finally to diversify into new manufacturing industries. These manufacturing activities consisted of three companies: A/S Union, STORNO and GNT Works.

#### *A/S UNION, 1946-1954*

The first initiative concerning new activities was taken in the autumn of 1945, when GNTC was invited to invest DKR 500.000, representing 25 per cent of the share capital, in a new company which was about to take over the production of a book-keeping machine from a Swedish company.<sup>11</sup> In February 1946, the managing director Bent Suenson informed the Board that the Swedish company was hesitant but that the co-operation with its managing director H.L. Schmidt had let to new unexpected possibilities. A Danish producer of cash registers A/S KARV could be

<sup>9</sup> Steen Thomsen: *De største danske industrifirmaer 1904-1987*, i *Presse og historie festskrift til Niels Thomsen*, p. 224, 1990.

<sup>10</sup> GNTC Archive, Annual accounts 1946 and 1970.

<sup>11</sup> GNTC Archive, 20 November 1945.

bought at a reasonable price because the owners were about to give up. A/S KARV had been founded in 1938 and employed around 35 people, and in a very detailed 10-page report, GNTC described the advantages and the dangers of investing in the firm. Despite the fact that the well known Danish industrial firm DISA had rejected a take-over because they believed that a similar activity was needed in order to restructure the problematic cash register firm, GNTC decided in August 1946 to invest in the company. A/S KARV was renamed A/S Union and the involvement was kept secret from the public.<sup>12</sup> This last decision was probably the wisest. During the next 8 years the annual turnover of A/S Union never exceeded DKK 1 million and there were problems with the quality of the production which was below that of the Swedish and German competitors. In December 1951, two managers from A/S Union recommended that the Board of GNTC should close down A/S Union because of the difficult market situation. One of the Board members of GNTC - Westermann - believed that the turnover of A/S Union was so small that it should be possible to alter the course of the development, if the leaders concentrated more on sales. The Board of GNTC decided to continue the activities and placed Westermann on the Board of A/S Union.<sup>13</sup> Exactly two years later - in December 1953 - accountants from GNTC calculated that even a doubling of the turnover would not be enough to generate a satisfying result. As a result, the Board of GNTC decided to liquidate A/S Union and pay the debts of DKK 1.2 million - more than twice the purchase price two years earlier.<sup>14</sup> A/S Union showed that it was difficult for GNTC to make money in a new area. Fortunately, the limited scale of the investment meant that it didn't have any crucial implications for GNTC, except that the Board was more cautious after 1954.

#### *The Rise and Fall of STORNO, 1947-1970*

GNTC had more luck with another manufacturing activity that was related more closely to telegraphy, namely mobile telephone systems. In July 1947 two young engineers - Erik Petersen and Svend Falck Larsen – proposed that GNTC establish a new company which could produce their newly developed FM radio system. The two engineers had already supplied a Danish fire brigade with a mobile radio system with technology built upon radio equipment from German fighter planes left at Copenhagen Airport after the war. Petersen and Falck Larsen now needed the financial support to develop their product and to establish a new production facility. The timing of the two engineers was perfect: in July 1947 GNTC was very open to ideas for new activities and they were especially looking for interests which were connected to the core business – telegraphy. Already on 7 August 1947, Board member and managing director Bent Suenson supported the idea and emphasised that this production fell within the interests of GNTC. Furthermore the company's investigations showed that it was a growing market. The customers were mainly public organisations like railway companies, police forces, fire brigades, and ambulance services. The Board approved the idea on 7 August 1947 and established “STORNO” in legal terms as a new department of GNTC - and not as a new subsidiary as suggested by the two engineers.<sup>15</sup>

In January 1948 Bent Suenson could draw the first preliminary picture of the development of the new company - STORNO. As mentioned by Suenson, it had required an investment of about DKK 850,000 even though there were only models of the new radio systems. Regular production was only started in the spring of 1948. At the beginning of 1949, orders amounted to about DKK 239,000 and the main customer was the Danish P&T, but, at the beginning of the 1950s, exports to Norway, England and Finland started to grow. The production of STORNO grew rapidly with

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<sup>12</sup> GNTC Archive, Minute book of the Board, 21 August 1946.

<sup>13</sup> GNTC Archive, Minute book of the Board, 18 December 1951.

<sup>14</sup> GNTC Archive, Minute book of the Board, 17 December 1953.

<sup>15</sup> GNTC Archive, Minute book of the Board, 7 August 1947.

annual orders of between DKK 2 – 3 million but the results of the company were unsatisfactory. The directors of GNTC felt that it was necessary to hire an expert in production and sales who could investigate how the efficiency and profitability of STORNO could be improved. These investigations were carried out by Brunø, managing director of the Danish telephone company Automatic A/S, and his conclusion was that the control of costs and pricing had been extremely inadequate and that, therefore, a completely new management team was required urgently.<sup>16</sup> GNTC advertised for a new managing director for the company and, at the same time, the Board decided to register STORNO as a limited company in order to demarcate clearer fields of responsibility. As a result A/S STORNO was founded in November 1958 – eleven years after the company's original establishment.<sup>17</sup> The new managing director was Niels Børge Bentsen and, helped by a growing demand, he was able to present the first surplus of almost DKK 800,000 already in 1959. But the profitability of the firm was still very low and dependent completely on isolated orders. These important orders came primarily from foreign customers like the London Metropolitan Police, taxi companies in Norway and Sweden, the armies in South Africa and Ireland etc. As a result, by around 1960 the export exceeded the domestic market. STORNO was now one of the big players in the growing market of mobile telephone systems and, consequently, the American telecommunications giant, Motorola, contacted STORNO in October 1959 concerning a future co-operation. STORNO could use the know-how and expertise of the Americans and become an agent for Motorola, who, on other hand, wanted a minority interest in STORNO. GNTC was not opposed to but rather hesitant about this proposal. The negotiations that followed lasted more than two years and the result was fruitless - perhaps because STORNO in the meantime had become involved in a number of different international alliances:<sup>18</sup>

In 1960 a new "STORNO Great Britain Ltd." was established in co-operation with the British company Southern Instruments who produced STORNO equipment in England and sold the brand on the British Commonwealth market – with the exception of the important markets of South Africa and Ireland. In May 1961 STORNO formed a collaboration with the Swedish company Bravour – a subsidiary of the industrial concern AGA – in order to develop new radio systems for the Danish army.<sup>19</sup>

It was indeed an international alliance that proved to be the crucial factor in the remarkable rise of STORNO in the 1960s. In the autumn of 1962, STORNO started negotiations with the German company Siemens. The remarkable result was an immediate deal of DKK 3 million and, more important, a future agreement over at least three years in which Siemens would buy a growing number of STORNO facilities valued at about DKK 50 million. This agreement was a milestone for STORNO. The German market was booming in the 1960s and Siemens proved to be an extremely strong partner in a market where STORNO had been fairly weak.<sup>20</sup>

Germany was by far the most important market for STORNO after 1964 and the fact that the products sold by Siemens in Germany were named STORNO meant a lot for the reputation of the international brand "STORNO" in the 1960s. In 1963 STORNO received orders valuing about DKK 24 million, in 1965 valuing DKK 32.6 million and in 1966 DKK 54.3 million.<sup>21</sup>

This outstanding growth attracted attention in Danish business circles, in particular, among the few large electronic companies which admired STORNO for their astonishing track record. The leaders at STORNO were self-confident and viewed the whole world as the future mobile telephone

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<sup>16</sup> GNTC Archive, Minute book of the Board, 26 September 1956.

<sup>17</sup> GNTC Archive, Minute book of the Board, 29 November 1957.

<sup>18</sup> GNTC Archive, Minute book of the Board, 16 October 1959.

<sup>19</sup> GNTC Archive, Minute book of the Board, 5 February 1960.

<sup>20</sup> GNTC Archive, Minute book of the Board, 4 October 1962.

<sup>21</sup> GNTC Archive, Minute book of the Board, 16 January 1967.

market. In 1966 the financial manager O. Friis Jensen announced in public a five-year strategy for STORNO with an annual growth rate of 33 per cent.<sup>22</sup> These remarkable figures were actually not unrealistic – the growth continued until the end of the 1960s and, in 1969, orders exceeded DKK 100 million. By that time, the size and activities of STORNO were about three times bigger than the telegraphic activities in the parent company. But the management of GNTC still used most of its time on the telegraph business, leaving the strategies and daily leadership to the managers at STORNO. The relationship between GNTC and STORNO was, in legal terms, very close but in practice this "department" of the company was very independent.

Nevertheless the Board of GNTC was worried about the uncontrolled expenses and the debts of the company. As a result new leadership was introduced in January 1969.<sup>23</sup> The three new managers – Leif Christensen, Friis-Jensen and Erik Petersen (one of the founding engineers) – presented a fantastic report to the Board of GNTC three months later in April 1969: In the first quarter of 1969, the volume of orders had been raised to DKK 60 million. This amount, however, included orders from the STORNO agents in Holland, Norway and France who could only pay when they had sold the equipment. This was a dangerous situation for STORNO – partly because they produced for agents who built up huge stocks of equipment without being able to pay, and partly because STORNO was unable to control such a huge production. In 1969 and 1970 the production facility of the company faced structural problems; delays in the delivery of vital components and too low a capacity in the workshops.

In the summer of 1970 the worst possible thing happened. Siemens decided to cancel the agreement on the German market and suddenly there was a discrepancy of DKK 25 million between the forecasts and the reality. In addition, STORNO needed capital to rebuild a new sales organisation in Germany and, consequently, GNTC had to provide DKK 10 million in new share capital. In March 1971 a new manager took over – Peter Vange – who was forced to downsize the production and fire more than 400 employees.

In 1974 the new managing director of GNTC, Erik B. Rasmussen, presented his own analysis of the situation to Board of GNTC. Rasmussen underlined that STORNO was badly equipped to compete in the mobile telephone market that was expanding in terms of mass production and technological development. According to Rasmussen the reasons for STORNO's weak position were as follows:<sup>24</sup>

- STORNO had a limited product portfolio,
- STORNO had to work on many different markets with different technological standards,
- STORNO needed volume in order to justify the investments required in specific semiconductors and automatic production,
- STORNO was financially weak,
- STORNO had an inefficient organisation that was unable to meet the demands of the future,
- GNTC did not have the necessary managerial capacity – either in the head office or in the subsidiaries.

Rasmussen concluded that GNTC could either put all its financial resources behind the firm and make a long-term investment in the future of STORNO, or that STORNO could be sold to a bigger firm within the mobile phone business. The Board decided upon the latter solution and STORNO was sold to General Electric in 1975.

In an interview from 1977, the Chairman of the Board Bent Suenson stated that the reasons behind the sale of STORNO were, primarily, lack of necessary capital and the fact that GNTC had no directly related products.

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<sup>22</sup> Former managing director Erik B. Rasmussen, Notes from the history of GNTC, 2001.

<sup>23</sup> GNTC Archive, The monthly statements of the managing director, January 1969.

<sup>24</sup> Former managing director Erik B. Rasmussen, Notes from the history of GNTC, 2001.

### *GNT WORKS and A/S AUTOMATIC*

The production of telegraphic equipment can be described as the cornerstone of the manufacturing activities in GNTC. Already in the 1880s, a small-scale production of equipment for the Company was established at the head office in Copenhagen. This production - primarily for the company but also with some exports to China and Great Britain - continued in the following decades and in 1945 around 30 people - mainly engineers - were employed at the workshop called GNT Works. As mentioned earlier, the managers of GNTC wanted to supplement the telegraph business with manufacturing and therefore, in 1945, a modernization of the workshop on the fourth floor of the head office was under consideration. The main products of GNT Works were telegraph machines following the Wheatstone principle. By moving to a better production facility in 1949, simplifying the production and supplementing the production with industrial electronic clocks, turnover rose from about DKK 700,000 in 1948 to DKK 1.6 million in 1952. But in the following years this growth in turnover stagnated at about DKK 1.8 million.<sup>25</sup> The main reason behind this disappointing development was the modern "Teleprinter" that outstripped the Wheatstone Telegraph machine because it was faster and did not require trained personnel.

The response of GNT Works was to begin the development of a new teleprinter in 1951. This process proved to be long and difficult. In 1954 an experimental model was ready and in 1956 a prototype was tested in the technical department of GNTC and shown to have many defects. Two years later, at the end of 1958, the Board of GNTC discussed the project and expressed concern about the cost of the project that now amounted about DKK 1.7 million. The Board decided to continue the project, but some Board members noted that any future projects of this size should be approved from the beginning by the Board of the parent company.<sup>26</sup>

In March 1961, the Board of GNTC discussed the teleprinter project again and this time the project lacked support from the members. Even the manager of GNT works, K. Binzer, dissuaded the Board from continuing the project, and one Board member asked if another company could take over the production. Binzer replied that the Swedish company Ericsson had shown some interest. At the close of the discussion the managing director of GNTC Suenson concluded that GNTC could not be involved in a new expensive production.<sup>27</sup>

Then in March 1962 STORNO started to show some quite good results, and GNT Works had also received some substantial orders at the beginning of that year. At a Board meeting in March 1962, Suenson informed the members that a new situation had arisen regarding the teleprinter. The Swedish and Danish Post & Tele administrations had now shown interest in the teleprinter and, therefore, major orders were within reach. These two factors - good results from the subsidiaries and possible new orders - were enough to change the viewpoint of the Board. In the words of Suenson GNTC now had to "put every ounce of energy into the delivery of the Teleprinter".<sup>28</sup>

After this decision the Board of GNTC followed the development of the teleprinter intensively. The first reports were quite optimistic, the Swedish and Danish Post & Tele administration had paid in advance and the time schedule was kept. The first worrying message came in February 1963 when Suenson informed the Board that the American company, Western Electric, had introduced a new teleprinter at about the half price of the machine from GNT Works.<sup>29</sup> On 5 December 1963, more unsettling information was related to the Board of GNTC. The costs of rebuilding the factory had risen from DKK 350,000 to about DKK 800,000 and the plant and machinery from DKK 350,000

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<sup>25</sup> GNTC Archive: The monthly statements of the managing director, Nov.-Dec. 1951.

<sup>26</sup> GNTC Archive, Minute book of the Board, 18 September 1958.

<sup>27</sup> GNTC Archive, Minute book of the Board, 2 March 1961.

<sup>28</sup> GNTC Archive, Minute book of the Board, 14 March 1962.

<sup>29</sup> GNTC Archive, Minute book of the Board, 7 February 1963.

to DKK 1.1 million. As a consequence, the Board decided that it was necessary to strengthen the administrative leadership of GNTC.<sup>30</sup>

In February 1965 the Swedish P&T informed GNTC about some minor defects after tests of the teleprinter, and in June the same year the Danish P&T came with a very serious criticism of the product after a similar test. At the same time GNT Works had to postpone the deliveries planned for 1965.<sup>31</sup>

In the same year plans were made for a new, modernized teleprinter factory at a cost of almost DKK 25 million. The property had already been bought, but the plans for the factory were postponed. At a Board meeting on 6 December 1966, the chairman of GNTC - Stevenius-Nielsen - noted that the Company had already invested huge amounts in the teleprinter project, and that it should be careful not to invest more in STORNO and GNT Works than the Company could bear.<sup>32</sup>

In the spring of 1967, the managers of GNTC investigated different possibilities concerning the future of GNT Works. One possibility was to build the new factory and to try to speed up production. Only 171 teleprinters had been produced in 1966 - far below the agreements of 850 printers. Another solution was to find a partner with financial and technical capabilities in order to share the development expenses.

During the summer of 1967 contacts were made to the Swedish company Ericsson which earlier had shown interest in the production of teleprinters. At a Board meeting in October 1967 one of the managers of GNTC - Holmblad - informed the Board about the negotiations with Ericsson. The plan was to share the Danish telephone company Automatic A/S, in which Ericsson already owned 49 per cent of the shares - the remaining 51 per cent were held by a private family and a private foundation.

GNTC bought these private shares in December 1967 and, in January 1968, Telefon Fabrik Automatic A/S changed its name to GN Automatic A/S. The new company bought GNT Works and the production of the teleprinter was moved to the telephone factory. The turnover of GN Automatic was DKK 77 million in 1968 and the first year ended with a deficit of DKK 2 million.<sup>33</sup>

In the following years, Ericsson and GNTC had to support the company with several million kroner, mainly because of difficulties with the production of the teleprinter. Ericsson demanded the development of a new and more efficient model, and better production control. It was first in 1971, after three years with annual owner investments of about DKK10 million, that the production of teleprinters was under control and kept within the budgets.

As indicated above, the development and production of the teleprinter was a long and very expensive experience for GNTC lasting from 1954 to 1972. Nevertheless the co-operation with Ericsson and the ownership of Automatic provided a crucial increase in the industrial turnover of GNTC and, furthermore, it provided important experience in the field of information technology which the company is still building on in the year 2001.

## **Conclusion**

In 1973 GNTC presented its first official consolidated accounts for an industrial conglomerate. Turnover was DKK 599 million, of which the telegraphic activities accounted for DKK 29 million and the industrial activities DKK 554 million. Already at this point GNTC was no longer a dusty, old telegraph company.<sup>34</sup>

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<sup>30</sup> GNTC Archive, Minute book of the Board, 5 December 1963.

<sup>31</sup> GNTC Archive, Minute book of the Board, 17 June 1965.

<sup>32</sup> GNTC Archive, Minute book of the Board, 6 December 1966.

<sup>33</sup> GNTC Archive, Minute book of the Board, 2 March 1969.

<sup>34</sup> GNTC Archive, Annual accounts 1973.

The starting point for the industrial activities can be seen as a struggle for survival. Some stockholders were eager to liquidate the old and wealthy Telegraph Company that was in very dire straits after 1945. But it is probably an oversimplification to say that GNTC survived because of this diversification into manufacturing. On the contrary, the company had huge difficulties in creating a profitable business. The cash register factory A/S Union was a clear failure but this disaster, which ended in 1954, was fortunately on a small scale. The Board of GNTC ignored the fact that the old and experienced industrial company DISA had, only one year earlier, refused to buy the company because they believed that a closely related business was needed in order to make the problematic company profitable.

STORNO was a success in terms of turnover, which grew dramatically in the 1960s especially because of the German market. GNTC was never able, however, to control costs and the rapid growth of the company combined with this lack of control meant that the leaders were unable to re-establish the company after Siemens cancelled the agreement on the German market in 1970. Technically the company was at a high level, as indicated by the huge interest in co-operation from giant teleproducers like Motorola, General Electric, Ericsson etc.

Lastly the “original” subsidiary GNT Works faced some overwhelming problems with the teleprinter project. Only with the help of Ericsson, through A/S Automatic, was it possible to establish a stable production - after almost 30 years of product development and production instability. Automatic was not a very profitable company but there were skilled engineers within the firm who could help the future production and, at the same time, Ericsson could provide the necessary capital and technical knowledge.

These three companies were all involved in technology but otherwise the three subsidiaries of GNTC were very different in their production and markets. Union was a small company, unrelated to telegraphy and oriented towards the domestic market. STORNO on the other hand was involved in telecommunications and, already at the beginning of the 1950s, the company was very much export-oriented like the parent company. GNT Works was also related to telegraphy and, at the same time, it was a highly technological firm like STORNO also employing skilled engineers. In December 1952, the Board of GNTC had considered a merger of GNT Works and STORNO but an investigation by an industrial expert concluded that it would be too difficult and complicated to merge the production of the telegraphic machine company and the radio telephone company.

One can therefore say that GNTC diversified its activities and the subsidiaries worked highly independently of each other. It was difficult for all three companies to create a profitable business. In the case of GNT Works this was because of heavy development costs and in STORNO it was due to uncontrolled growth in the 1960s.

GNTC had more luck with industrial companies in which it held only a passive shareholder interest. In 1956 GNTC extended its ownership of A/S Hellesens from 49 to about 90 per cent and this company was very profitable in the 1950s and 1960s. GNTC also owned about 25 per cent of the share capital of the electrical fittings manufacturer LK and this company was also very profitable in the 1950s and 1960s. Both companies became part of GNTC's industrial empire in the 1970s.

In conclusion, one could argue that those subsidiaries distanced from GNTC were more successful than the companies supervised by the Board of GNTC. One reason might be that the three subsidiaries of GNTC were in the initial establishment phase and, therefore, demanded a great deal of investment. But it was probably also because the managers of GNTC concentrated their efforts on continuing the telegraphic activities and because of their lack of expertise in industrial production.

There was, however, one pillar of strength in GNTC after 1945 -namely the access to capital. The fortune of the wealthy Telegraph Company - originating in the golden pre-war years – was indeed

the cornerstone in the expensive building up (and survival) of industrial activities within GNTC after 1945.