

# CASO PRÁCTICO

# Simoco International

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## 1. INTRODUCTION: HISTORY OF THE GROUP.

### 1.1. The Origins of Simoco: a Bit of History.

On July 1, 1996 a group of directors with experience in managing multinational firms in the communication sector carried out a Management Buy Out (MBO), creating Simoco<sup>1</sup>. They bought the Mobile Radio activities of Philips. It was a complicated operation, including a restructuring and involving the participation of Cinven<sup>2</sup>, Europe's largest private investor. A number of these buy out directors had previously been involved with this Philips operation including the original chairman Ian McKenzie. The commitment of Cinven, combined with Simoco's plans for long-term investment and expansion, provided the assurance of the company's stability in a dynamic marketplace. Simoco originates from W.G. Pye and Company, created in Cambridge in 1896 by William George Pye and his wife Annie Eliza with the idea of designing and manufacturing high precision scientific instruments. However, in 1921, after the enormous demand for instruments created during *World War I*, the market collapsed, and the Company decided to enter the new field of wireless. It designed and built, in one week, Pye's first radio set to receive the first experimental broadcast signals.

In 1939 Pye refused to accept an order for an infantry pack set, designed by a government establishment, because it was too heavy and expensive. Within six weeks the Company offered the prototypes of two alternative designs, and after successful field trials, orders were placed for the first Pye "walkie-talkie". Further developments were made, including the first ever Very High Frequency (VHF) mobile radio built in quantity.

As a result of the experience gained in mobile telecommunications during the war, Pye decided to enter this market. In 1946 he formed Pye Telecommunications Limited. During the 1950s and early 1960s, Pye Telecommunications expanded its scope of both

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<sup>1</sup> Simoco derives its name from Systems Integration Mobile Communications. Simoco specialises in integrating communications equipment in order to provide a complete mobile solution for professionals.

<sup>2</sup> CINVEN is a Venture Capitalist.

products and markets, supplying equipment and radio systems to Europe, and the Pacific.

On 1964, the Pye Directors sold a 70% shareholding of the Company to Philips, and the remaining 30% the following year. Over the following 30 years Philips acquired a number of companies, to strengthen its product portfolio and market reach, namely:

- TRT, the major French Telecommunications company.
- Mobicom, the specialist design and integration company in line and radio communications.
- WTI, the joint venture Telecommunications company between Philips and the Government of West Bengal, specialising in the supply of radio equipment to the Government and the Police.

In addition, the company had been highly successful in the development of new protocols, such as MPT 1327 trunking, right up to the current day new digital standard, TETRA.

The company had always been at the forefront of the technological developments in mobile radio communications. It had demonstrated a consistent commitment to quality and technical innovation and had accumulated a very valuable know-how and experience in the past decades.

In the annual report of 1997, Simoco's Chairman, Arthur Walsh, highlighted: *“ 1997 was a challenging year for Simoco, as we began to re-establish the company as a world leader in global mobile communications . . . we have organized the company to be able to concentrate on PMR/PAMR<sup>3</sup> systems with a long term objective being to exploit the emerging markets for TETRA (Terrestrial Trunked Radio) systems..”*

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<sup>3</sup> PMR is the Professional Mobile Radio

## 1.2. Management Vision.

The managers saw important market opportunities in the communication sector, and Simoco was created with the idea of taking advantage of those opportunities:

- Improving the analogue PMR radio (PAMR) business
- Making a global success of TETRA. Ian McKenzie (Executive Chairman)<sup>4</sup> remarked: “...from the start, the key objective was to make the Company a major force in global radio communications. We have now realised this in one element of the business, TETRA, where Simoco is recognised as a leader in this new field of digital technology and was one of the first to demonstrate a range of working TETRA solutions...”

The success of this MBO was based on the capacity of the managers to generate enough cash flow to pay the capital back to the Venture Capitalist and to create wealth for its shareholders. For that reason, the quality of the management was a decisive factor in this process. Simoco was managed by talented people. Ian McKenzie was the Non Executive Director. He was the leader of the MBO and was the Executive Chairman from the acquisition to 4 January 1998. Also a Director of Advance International, Telecommunications Premium Services Limited and Semitron Industries Limited. Trained in electrical engineering, 30 years with Philips in Australia and from 1986 to 1990 in the United Kingdom. Director of GPT Business Systems Group from 1991 to 1993.

All of the directors had high qualifications. Take Arthur Walsh, who worked as a director of GEC, non-executive chairman of Northern Telecom Europe and most recently chairman of NTL.

From the beginning, they made a number of senior appointments and a new management structure was introduced. That gave them a strong management team able

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<sup>4</sup> Annual Report&Accounts 1996 Simoco.

to focus on the core activities of the group and enabled decisions to be made to enhance shareholder value of the company.

Simoco **has** always tried to strengthen its management team by choosing professionals from the wider telecommunications community. The team **has been** charged with the task of maximising the opportunities presented by the changing telecommunications market, in order to develop the market for TETRA beyond traditional PMR/PAMR applications.

### **1.3. The Company.**

*Simoco International Limited* **is** one of the world's leading companies in radio communications and affiliated services. With a track record of more than 50 years, it **is** recognised as an authority in the industry and **is** deeply involved in developing and enhancing standards for the future.

During all this time, it **has** provided high quality products, systems, networks and services to a diverse range of customers globally. This experience has been essential in the company's life since it developed a broad know-how in producing mobile equipments. Moreover, it has facilitated the acquisition of valuable information on customers' needs which has assisted them in their effort to differentiate their products from the competitors'.

The company was incorporated as *Cambridge PMR Limited* on 29<sup>th</sup> April 1996 and changed its name to *Simoco International Limited* on 31<sup>st</sup> May 1996. Simoco derives its name from *Systems Integration Mobile Communications*. As the name suggests, it specialises in integrating communications equipment in order to provide a complete mobile solution for professional bodies and intitutions.

The company is focused in four business areas:

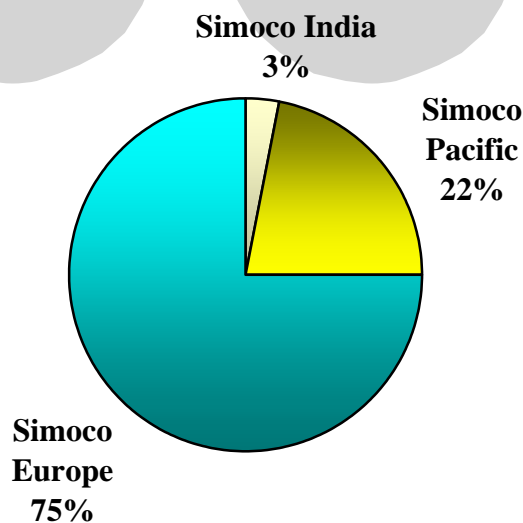
- the development of advanced mobile communications products.

- the provision of complete network solutions.
- commissioning of complete communications systems and on-going maintenance.
- Systems Solutions- the integration of IT, telephony, mobile radio and mobile data.

Simoco **has** its headquarters in Cambridge, with sales, service, research and manufacturing operations throughout the world. Since the acquisition, Simoco **has been** divided into three main regional areas: Europe, South Asia and the Pacific, each region having a regional branch office structure, which enables them to focus clearly on the different needs in each area.

Simoco **is** positioned in the main areas, having subsidiaries in UK, France, Belgium, Ireland, Italy, Spain,... Simoco's office in South Asia **is** located in Calcutta, and it was one of the main suppliers to the Indian Government. Simoco's office in Pacific **is** based in Melbourne, Australia, and **provides** the full range of Simoco's products and services to the region.

**SIMOCO INTERNATIONAL**



With wholly-owned companies in 15 countries and a network of 36 offices and factories around the world, Simoco is well represented all over the world, offering customers global resources with local presence. Simoco's size is small enough to provide individualised solutions and large enough for global delivery.

The telecommunications industry is one of the most dynamic markets in the world. The explosion of mobile communications is unprecedented. The convergence of IT and telecommunications (fixed and mobile telephony) is also presenting dramatic new opportunities for operators who can provide more choice, flexibility and efficiency for users.

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## 2. PRODUCT DESCRIPTION.


*“I can manage without any other system except my communications”* Roger Thayne,  
CEO, Staffordshire Ambulance Authority.

### 2.1. Current Products: Analogue Technologies.

Simoco specialises in Private Mobile Radio (PMR) networks, products and services, essential for safety-of-life applications or to improve efficiency and customer service in many industrial and commercial organisations.

A radiotelephone can be defined as a telephone without wires, the connection to the local exchange being through the medium of radio. The radiophone differs from fixed telephone networks in some ways: it requires a portable source of power; the local exchange is replaced by a local base station; the mobile station needs a radio antenna which must be suitable for the radio frequencies allocated within the radio spectrum; two radio channels in general must be allocated to each mobile phone for a forward and a return path radio.

A radiotelephone or mobile radio can be classified as:

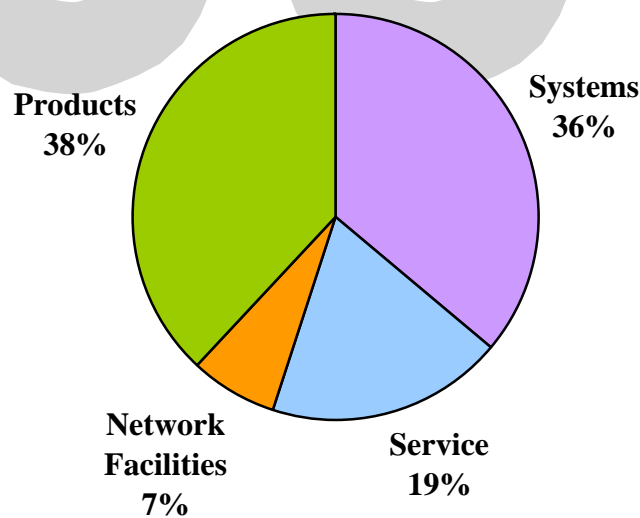


- Cellular phone
- Cordless telephone
- Personal Communication
- Private Mobile Radio (PMR)
- Radiopaging
- Radio and citizen band radio.

No other mobile communications technology offers the flexibility and diversity of radio. Reliable, high-quality voice and data communications can be established quickly and easily to provide cost-effective local and regional systems or advanced digital national and international networks. Radio systems can also interface with other communications systems, surveillance, security and IT systems, to provide complete integrated solutions. Moreover, mobile radio offers predictable costs and significant cost advantages over cellular systems.

The PMR is used for “*closed user group*” which is a network that can only be used for a certain group of people. It enables short speech and data messages to be passed between control centres and groups of users and it is custom designed to match precisely each organisation’s structure and working processes.

Simoco’s specialist development groups, manufacturing centres and service teams are organised to provide both individual elements and digital radio communications equipment as well as support services that include: systems development, systems integration, project management, consultancy, propagation analysis, finance, training maintenance and network services.



## 2.2. Research and Development in New Products: TETRA.

**TETRA (Terrestrial Trunked Radio)** is the only approved standard for digital mobile radio communications offering unprecedented benefits not available in any other mobile radio or telephony system. *The European Communications Institute (ETSI)* created the standard over a period of seven years. The goal was to provide maximum practical benefits to users, utilising highly reliable digital voice and data communications.

TETRA has distinctive features that make it superior to analogue and GSM: it is a fully digital open standard with a pan-European spectrum that uses up-to-date technology and PMR features. TETRA-based products are renowned for high speech quality, even under poor signal conditions or in noisy environments. Other features include rapid call set-up, two way conversation, simultaneous voice and data, high security, network broadcast facility, call priority allocation, group call and low cost infrastructure. TETRA uses time division multiple access (TDMA) technology with four user channels on one radio carrier.

Simoco **is** one of the leaders in TETRA's development. Simoco has helped to accelerate the implementation of the TETRA standard, developing an extensive range of TETRA solutions for both voice and data.

Their investment in R&D, together with their strategic alliances with other leading technology companies, has helped the company to develop an outstanding range of TETRA compatible products, network solutions and services: the first operational multi-site TETRA network in the world; the first patent for a voice enhancement system; the first successful testing for TETRA in tunnels; the first public demonstration of video and internet access via TETRA; and the first TETRA hand-portables which offer two-way speech.

Simoco **is** one of only a handful of companies capable of delivering fully compatible TETRA equipment. The company **is** able to cater for the needs of small or large private operators, and provide infrastructure as well as user terminals.

The company's full range of TETRA products deliver all the benefits of high quality two-way voice and multimedia applications. An integral communications system is provided by incorporating radio communications equipment with IT and telephony systems. With the convergence of these technologies, systems such as automatic vehicle location, video images on the move, mobile Internet connections, quick mobile access to central databases, remote telemetry and simultaneous voice and data become a reality.

There are three main attributes of TETRA which enable a wide range of customer business propositions: work-group communications, which has been Simoco's traditional market-place, in which the customers are large utilities, public safety organisations and municipalities; cellular telephony, providing reliable services to road transport, municipal and other service organisations; and data communications. TETRA's ability to offer internet and intranet access to mobile users and operators has opened another field of customer efficiency gains.

### 3. EXTERNAL ANALYSIS.

*“It is not the strongest of the species that survive, nor the most intelligent, but the one most receptive to change” Charles Darwin.*

#### 3.1. The Land Mobile Radio Market in Europe: The European Pmr/Pamr Markets.

Whereas cellular and satellite-based technologies have been at the head of telecommunications in the last years, Land Mobile Radio has appeared to take a back-seat role. Only 7.5 million subscribers have been acquired over a period of 40 to 50 years. In addition, the cellular industry is in pursuit of a number of traditional LMR market segments, which makes the LMR industry very vulnerable. However, it is beginning to fight back by adopting digital technology itself.

There are two analogue systems for Land Mobile Radio: PMR and PAMR. **Professional Mobile Radio (PMR)** systems are mobile radio systems that public organisations and private businesses own, maintain and operate in order to meet their own internal communication needs, being granted frequency by the pertinent authorities. **Public Access Mobile Radio (PAMR)** are mobile radio services provided by public network operators to end users. Although both provide the same service, PAMR is owned, operated and maintained by a third party that charges fees to access and use the infrastructure. However, even in the case of PAMR, end users still need to purchase terminals in order to use the network.

PMR can be conventional (a single channel per subscriber) or trunked (a user can access a pool of channels). For PAMR, all systems are trunked since by its very nature, multiple users or user groups need to access a pool of channels.

A new division between analogue and digital technologies has become increasingly noticeable. Although the vast majority of European PMR networks are still analogue, the balance is shifting in favour of PAMR and digital systems.

A recent development in the European PMR market has been the arrival of **Short Range Business Radio (SRBR)**, which provides the user with a short range service without the use of a conventional base station and separate antenna. A single frequency channel is required to be used by each network. It has proved to be a great success in the US, especially in the “Family Radio” segment, and it has been introduced in most European countries, where certain conditions, such as harmonised frequencies, are met.

### **The European PAMR Market.**

PAMR networks began to emerge in the UK during the 1980s and the first standard, known as MPT 1327, was finalised in 1987. Several variations to this standard were introduced, raising the incompatibilities across countries.

PAMR systems have been identified in at least 18 European countries. The largest ones are Germany, the UK and France. The fastest growing markets are in countries such as Belgium, Spain and Portugal. Networks have been licensed and have begun operating in some East European countries.

The unique combination of technologies, products and software applications is what makes this market so different from mass-market mobile and cordless phone networks. The idea of the business is that with effective mobile communications, the right people have the right information at the right time, regardless of location. That is the basis for mobilising resources efficiently and managing assets in the field. The right communications solutions can reduce response times, improve productivity and increase organisational flexibility – factors that are crucial for enhancing customer service or performing statutory duties and responsibilities. In 1996, the European market for these products was in excess of £700 million.

### 3.2. TETRA Technology in Europe.

In the early 1990s the above-mentioned **European Technical Standards (ETSI)** developed a digital mobile radio standard, now known as **Terrestrial Trunked Radio (TETRA)**. The technical body had over 150 representatives. Besides those from Europe, activity extended worldwide to include the US, China, Asia and the Middle East. The standard was developed to ease congestion problems in large cities, to improve security of communications, to facilitate frequency allocation harmonisation, to increase the number of features available to users and to rejuvenate the market for mobile radios. Its appeal is based on the ability of both public and private network operators to buy equipment and compatible applications from a variety of vendors.

TETRA offers the automatic operation and frequency efficiency of trunking combined with the terminal autonomy of a conventional PMR. It has a multi-mode capability by combining these two modes, trunking and direct, in a single terminal and offers the standardised method for inter-working between these two modes. It is also designed for emergency situations when instantaneous communication is required, both between individuals and within a group.

TETRA, the digital standard for both PMR and PAMR, supported by the vast majority of the main mobile radio systems manufacturers in Europe, has suffered numerous regulatory and technical problems which have repeatedly delayed its launch, and dampened market enthusiasm. The majority of the main manufacturers have been supporting TETRA, including Motorola, Nokia, Ericsson, Alcatel, Siemens, Tait and Simoco. The first fully-operational, full-feature users are likely to be large public safety organisations willing to upgrade their older systems, joined at a slightly later stage by those PAMR operators running out of capacity and wishing to add functionality to their service.

Analysts predict that there will be some 80 million TETRA users by the year 2008. By staying ahead in developing TETRA based equipment, Simoco is well positioned to take a considerable share of this market.

### 3.3. Competitors.

The two major TETRA players in the European markets are two diversified mobile giants *Motorola* and *Nokia*. In addition to both companies, *Teledanmark* and *Telesystems International Wireless of Canada* are becoming important competitors in this market.

*Motorola* announced a number of contracts for TETRA-based systems during 1997, following the launching of its DIMETRA range of products. It received orders from the International Airport in Oslo, supplied a TETRA system for the underground rail network in Denmark together with Alcatel and sold its DIMETRA system to its distributor in Hungary.

*Nokia* has also been at the forefront of TETRA testing, and small systems have been operational in Helsinki, Copenhagen and the Netherlands. Other trials have taken place in Oslo, Berlin, Australia.

*TeleDanmark*, the Danish national operator, has been one of the major backers of TETRA, and many members of the company were involved in the TETRA MoU Group, which promoted TETRA in Europe. During an important trial by the operator, mobiles from *Motorola* and *Nokia* were tested over each other's systems and it was proved that both manufacturers' equipment was interoperable. Simoco joined these tests in December 1997.

*Telesystems International Wireless of Canada* was also becoming an important competitor in Europe at this time since it intended to create a Pan-European TETRA-based PAMR service. The company was well positioned in the three major markets: Germany, the UK and France, following successful bids for licences and a series of acquisitions of other operators. Its strong position would enable it to take advantage of economies of scale as well as operational expertise to pick up the remaining markets.



### 3.4. Other Digital Standards.

However, TETRA was not alone, and we must not forget two other digital standards that had been gaining ground in Europe over recent years: EDACS and TETRAPOL. **EDACS** is a digital trunked PMR system developed in 1987 by Ericsson. **TETRAPOL** was developed by MATRA in the early 1990's. During the absence of commercial TETRA products, TETRAPOL had been actively promoting the virtues of its systems, particularly for safe public use, as they affirmed that they did not try to compete with TETRA for PAMR subscribers on public networks. TETRAPOL claimed there were 400,000 potential users of its technology.

Ericsson's EDACS system proved popular in a limited number of European countries, with the largest number of systems being in Poland and Italy. As with TETRAPOL, EDACS was optimised for PMR applications, rather than for PAMR network operators.

### 3.5. The Figures.

It has been estimated that the European LMR market will grow from 8 million in 1997 to over 11 million in 2002. The total size and penetration levels of Mobile Radio in the region have been well below US levels. TETRA and other digital standards would account for at least 20% of the 2002 marketplace and over 40% of new sales in that year.

The value of the European LMR sales would increase to \$770 million in 2002, while the revenue streams being generated from PAMR would continue to expand from \$230 to \$485 million.

In Europe, the LMR industry has only 2.2% labour penetration whereas in the US it is closer to 15% of the labour force. This reason, together with the launch of new product lines and replacement sales, leads us to believe that there is still significant potential in the European LMR market place.

### 3.6. Main Customers.

Driven by a single-minded focus on the particular needs of professionals on the move, Simoco is committed to providing them with voice and data wireless communications equal to those available to their office-based colleagues. Through partnerships, Simoco helps its customers in Public Safety, MOD, Transport, local government, security, service industries, the utilities and business and industry to mobilise resources efficiently and manage their assets in the field.

- **Local transport.** In this competitive sector where operators aim to run an efficient service on time, Simoco's solutions improve contact between the operations room and drivers using mobile data to simplify communications and provide management information that can be used to improve timetabling. Also, Simoco is developing advanced applications to support electronic ticketing and vehicle condition monitoring.
- **Confined Space Engineering:** Simoco is widely recognised as the leading authority on confined space engineering, with an international track record in providing complete integrated solutions for complex underground communications, even in the most hostile environments. It has an international customer portfolio and provides its expertise to industries ranging from mining to underground rail systems. The techniques employed can be applied to many different environments, where communication is required either underground or in enclosed areas such as road or rail tunnels, sports stadia, bunkers and shopping centres. As well as providing coverage for radios and cell phones, other equipment can be incorporated into the system (CCTV surveillance cameras).
- **International Radio Installation Services.** This unit offers a complete range of services for civil engineering projects, working closely with contractors to offer design and erection of radio buildings, tower masts, power systems, installation and commissioning of complete communications systems through to ongoing maintenance, whatever the customer's size or the scale of requirements.

## 4. PHILOSOPHY AND STRATEGIC APPROACH.

*“Nothing ventured, nothing gained”* Proverb.

From the start, the key objective was to make the company a major force in global radio communications. Since the creation of Simoco, the management team concentrated on four major objectives: maximising revenue from the analogue business; developing TETRA technology as quickly as possible; reducing the organisation size to break-even; and maintaining the worldwide structure.

Simoco’s business focuses on customers’ needs and is built on a firm foundation of sound management and long-term financial stability. From a single source, the company provides a complete range of high-performance terminals and systems, tailored solutions, network systems and comprehensive support services. The establishment of focused business activities covering the core elements of the group (products, systems, services, network facilities and a widespread branch structure) has allowed Simoco to acquire competencies in all these areas. Simoco’s commitment to open standards, continuing investment in research and development and relationships with leading companies in related technologies ensures that customers continue to benefit from world-class solutions.

Market focus has always been essential to their global success. In addition to organising the company to reflect and address the differing needs of regions, they have established a product policy strategy at group level to ensure that their products match different market requirements. They have achieved rapid improvements in their product portfolio and a heightened awareness of time to market. The product portfolio has been further strengthened by acquisitions, such as *Raywood’s* in Australia and the remaining shareholding of *Mobicom*. Despite this regional office structure, they have been able to achieve a single corporate image in all the regions of the world in which they operate, by launching the new company name worldwide, with exposure to sections of the customer base.

Simoco's philosophy has always been to assist organisations in developing effective and innovative mobile communications systems with tangible benefits in increased productivity, a safer working environment for staff, improved personal and public safety and improved customer service. This philosophy implied understanding customers' needs and being able to tailor mobile communications systems to each customer's specific requirements.

Another key element in the company's strategy has been to rebuild and develop the indirect distribution network.

To succeed, the strong management team and the commitment of staff throughout the world has been essential. Experience, resource, high-quality products, continuous investments in new technology and a focus on new and existing markets has permitted the firm to continue growing and developing.

The objectives of the company have been efficiency-driven and have reflected customer feedback: to simplify the company to make it easier to do business; to eliminate waste and improve profitability in all parts of the company by organising resources into focused, results-driven groups; to develop and launch TETRA to become a leading provider of radio telecommunications.

#### **4.1. Development of the Business.**

The Group was set up to acquire the business and assets of the private mobile radio business from Philips Electronics on 1<sup>st</sup> July 1996. The main activities were acquired at that date, but many subsidiaries were operated on Simoco's behalf by Philips during the period to 1<sup>st</sup> December 1996. During the first months of trading, a significant amount of activity was devoted to the separation of the organisation from *Philips'* national selling organisations and the rationalisation of activities in the UK.

The Group's principal activities during the period were the design, manufacture and sale of private mobile radio components, systems and services, and it employed over 1,600 staff world-wide across the full range of activities at December 1996.

The year was characterised by dramatic progress in the development of TETRA and the company continued investing heavily in the next generation of TETRA digital technology, having a first prototype product available by the end of the year and launching three new products. Simoco's first range of TETRA products sparked great interest and many requests for quotations, and the firm was well-positioned to take advantage of the expected increase in demand.

The Group decided to rationalize activities at *Mobicom* in Derby, amalgamating *Mobicom* and the systems integration operation to become **Systems Solutions**. This aimed to yield improvements in the cost base and also to improve results in the radio systems integration business. By that time, the Group management had completed acquisition work and could devote its attention to improving the operational performance of the existing PMR business. New operations were started in a number of Pacific countries to benefit from the growth forecast in these markets: Indonesia, Singapore, Hong Kong, Malaysia and Taiwan.

1997 has been a challenging year for Simoco, as it has started to re-establish itself as a world leader in global mobile communications. During the year, the company has made good progress in product development which has resulted in a large number of product launches.

The company is organised so that it can concentrate on PMR/PAMR systems, and its long-term objective is to exploit the emerging markets for TETRA. The company is expected to be a world leader in TETRA by the year 2000.

Since the acquisition, much effort has been devoted to restructuring the business. In 1997, changes have been made to the organisational structure to provide greater customer focus and clarity of direction. This process includes the reduction of overheads, the divesting of small, unprofitable non-core activities, re-location of the

world-wide spares operation and customer services to Cambridge, rationalisation of properties in Rouen and Melbourne, as well as the consolidation of activities in overseas sales offices by improving international distribution through the appointment of experienced distributors in key markets. Considerable effort has been made to open distribution channels to respond to increasing demand, and this was achieved by selecting specialist distributors to work within the UK and Germany.

In February 1997, the Group acquired *Raywood Communications Pty Limited* in Australia, as part of its strategy to develop its interests in markets compatible with its core business. *Raywood* designs, manufactures and distributes taxi dispatch systems across Australia, where it has a high market share. It has also been exporting equipment into Europe, Malaysia and the Middle East and has an office in Europe. The acquisition will facilitate distribution of these systems to many overseas markets.

During the year, the company has completed the acquisition of a 20% shareholding in *Repart*, the second network operator in Portugal. They also have acquired *Padnall Structures*, in order to offer a comprehensive site structure service, and this has led to their winning a contract with Sardinia Forestry. Sardinia presented a major challenge - coordinating fire and rescue operations with aircraft and helicopters to ensure rapid response in a heavily-forested, mountainous area. Simoco has installed a sophisticated control system using touch screen technologies to control mountain-top radio sites across the island and link hundreds of Simoco portables and mobiles used by the Sardinian rescue services.

They will continue selling the small, unprofitable areas of business in order to be able to invest in the TETRA project. Since the year-end, the company has sold its UK Aerial Sites business and also Mobilefit, Short-term hire and Community repeaters.

The company will continue investing heavily in the development of **TETRA** products and solutions. TETRA equipment is expected to contribute to group sales in the second half of 1998. Progress is being speeded up by a joint development with *Frequentis* in

Vienna. Together they have a team of 350 experts dedicated to placing TETRA products on the market.

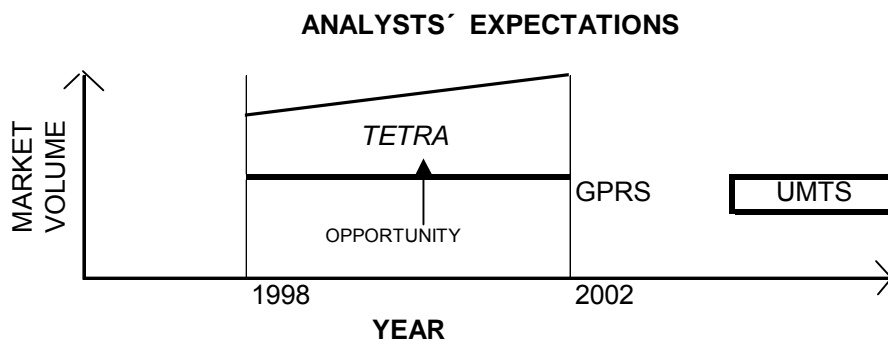
Having been the first company to demonstrate multimedia data transfer through TETRA, SIMOCO won an award under the UK Government’s Department of Trade and Industry’s multimedia demonstrator programme. It also introduced a TETRA propagation planning tool to help operators and system integrators to develop radio systems using a TETRA standard.

As regards value-added systems, Simoco’s strategy is focused on strengthening its presence in growth markets and expanding its international customer base by enhancing its local presence in the Middle East, Western and Eastern Europe and the Far East.

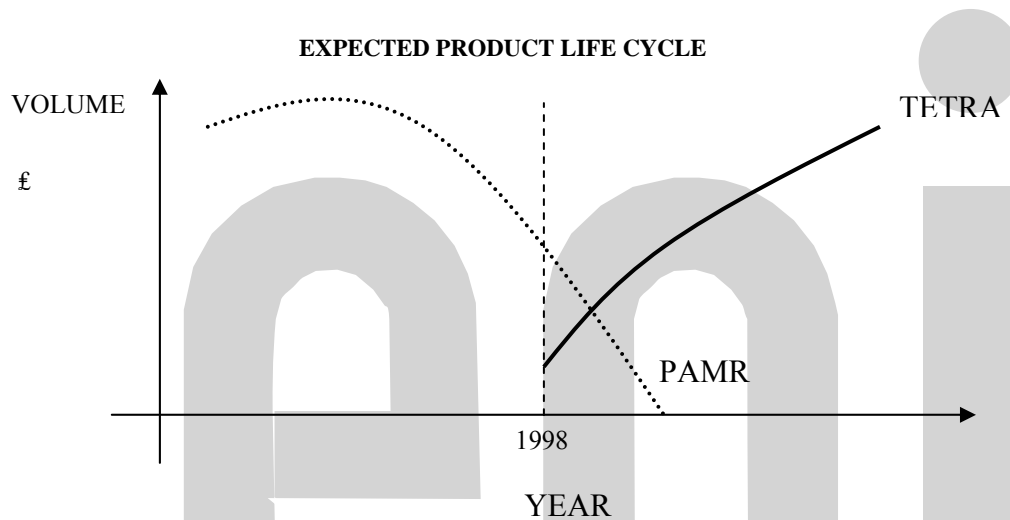
#### 4.2. Strategic Approach.

*“Don’t put all your eggs in one basket” Proverb.*

The MBO was supported by the market opportunity due to a technological revolution at the end of the 90s. Between 1998 and 2002, Tetra is expected to be a successful product until the entrance of UMTS technology.

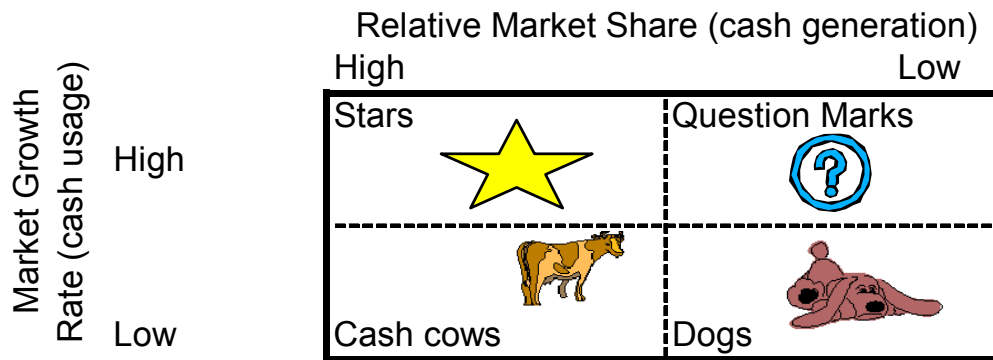


The product life cycle theory postulates that products pass through a number of different phases or stages in their life, namely, introduction, growth, maturity and decline. Managers have to work with both products, PAMR and Digital PMR. If we look at both product life cycles together, we can observe:



The model followed by Simoco can be shown in a BCG (*Boston Consulting Group*) matrix. BCG developed a simple conceptual framework, named the Growth-Share Matrix to help corporate managers to decide portfolio strategies. This is a tool for managing businesses with more than one business line.





\*HELDEY, B. 1997: " Strategy and the Business Portfolio" Long Range Planning, February pag. 12

The main objectives in a corporation are growth and profitability. As stressed by Majluf and Hax,<sup>6</sup> the principal advantage of a multi-business organisation is the ability to transfer cash from businesses which are highly profitable but have limited potential for growth to others that offer expectations of sustained future growth and profitability. This leads to integrative management of the portfolio that will make the whole larger than the sum of its parts. To obtain this synergistic result, resource cash generation and usage. Although it can be argued that companies can obtain resources from external financing, through debt or the issue of equity, inherent in the BCG matrix is the belief that, ultimately, every external debt will have to be matched by an internal cash flow. Therefore, balanced assignment of internal cash resources is essential.

Locating the products in the matrix, managers can make decisions from a more objective point of view. A good business line has profit potential, growth potential and diversification potential. Simoco’s strategy has been to maintain its relevance in the analogue business and invest the profits in digital development.

<sup>6</sup> MAJLUF, S. and HAX, A 1983: “The Use of the Growth-Share Matrix in Strategic Planning” *Interfaces* 13, February pp. 46-60.

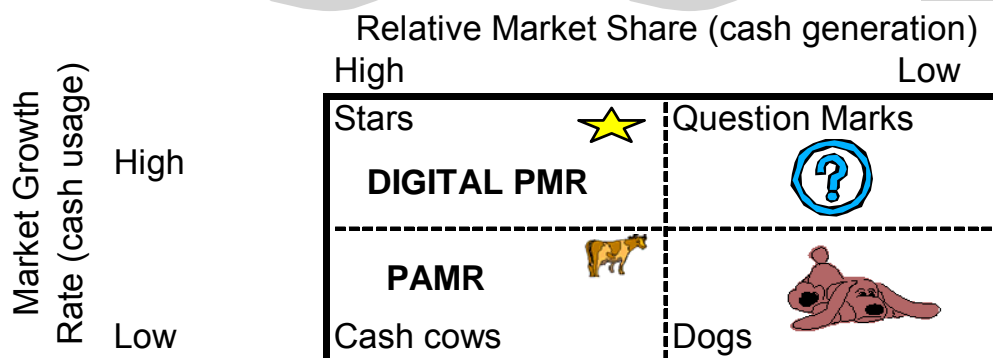
To be successful, a firm should have a portfolio of products at the different stages, with different growth rates and different market shares. The right composition has to be a balance between cash generation and reinvestment needs.

Key value drivers to determine the cash flows of a product:

- Margins and cash generated are a function of market share. Usually, high margins and high market share go together. This leads to a high ROC<sup>7</sup>.
- Growth requires investments (cash outflows).
- High market share must be earned or bought.
- No product market can grow indefinitely.

The strategic picture managers are thinking about is:

**DIRECTORS' EXPECTATIONS**



Ian McKenzie considers digital PMR the star of Simoco's portfolio. Here, profit is a promise. Managers believe that the leadership position the company has in the market will generate a competitive advantage that can be maintained during a long period of time.

With the passing of time, all stars fade away. Above-average growth cannot be maintained forever. The real return from the star comes when changed for a cow, which is a product without high investment requirements, but with high income.

The other strategic product is the PAMR, which is considered a cash cow. By definition, a cash cow gives a return on assets in excess of the growth rate. If that is true, it should generate more cash than it uses. The management's idea is to get cash from this business line, which has an interesting present but a risky future, and to invest in another business line (digital PMR) which does not have a present but can be expected to have a successful future.

Finally, Simoco's strategy can be described as a product-focused strategy, in which location on the matrix is essential for the success of the project. It is a clear strategy, in which the directors know what is required in order to achieve the company's goals.

## 5. FINANCIAL BUDGETING.

*“In the investment business, you don’t always get what you pay for, but you always pay for what you get” Anonymous*

One of the main issues when Simoco was created was its capital structure. This is important due to:

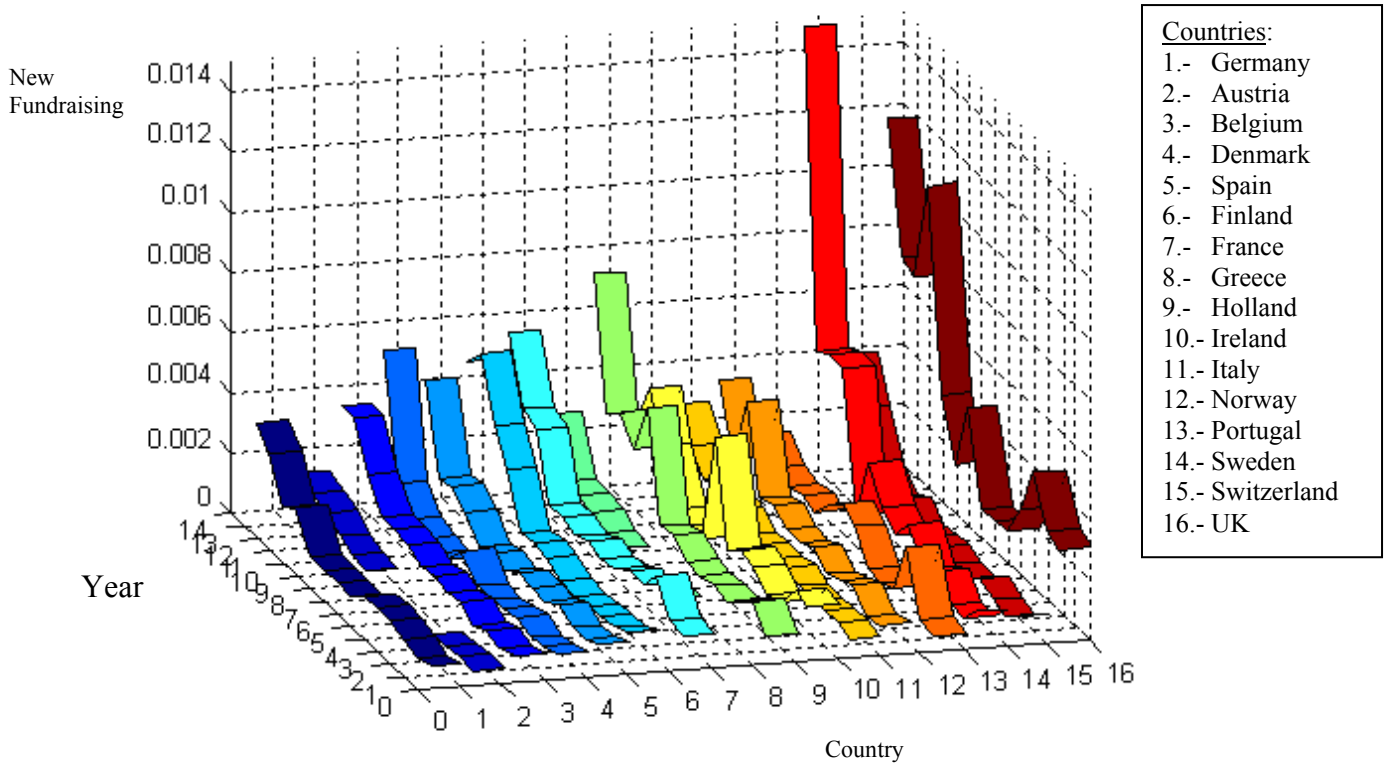
- The participation of a Venture Capitalist. Venture Capital is described as the “*business of building businesses*”, because Venture Capital invests in companies that have undeveloped or developing products or revenue. Venture Capital has a particular emphasis on entrepreneurial undertakings and less mature businesses<sup>8</sup>. The goal of the Venture Capitalist is not to control the company but it is to improve the company’s activities, getting the investment’s return when shares are sold.

Cinven is a leading private equity provider for larger European buyouts. They have participated in buyouts all over Europe, having offices in London, Paris and Frankfurt. Cinven has led buyouts with a total value in excess of €40 billion. It is the only firm in Europe to have led ten buyouts of over €1 billion. Cinven fundraises money in the English market, investing in companies located in Europe. The English Venture Capital Market is the most developed one in Europe, which facilitates the raising of funds for new projects. Cinven, being a successful Venture Capitalist, normally obtains rapid subscriptions when searching for funds. Yet, this puts pressure on the Venture Capital company, as Cinven cannot place funds in bonds or other average return investments for too long, so they are obliged to quickly find higher yield companies to invest in, in order to justify the administration fees they charge to every fund.

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<sup>8</sup> “Why and How to Invest in Private Equity” EVCA Special Paper published by the European Private Equity & Venture Capital Association (EVCA).©Copyright EVCA February 2002.

## FUNDRAISING IN EUROPE



\*MARTÍ PELLÓN, José and BALBOA RAMÓN, Marina 2003: “Impacto de la demanda y la liquidez sobre la captación de nuevos fondos de capital riesgo en Europa” *Forthcoming Working Paper Universidad Complutense de Madrid*, page 14.

The company has a team with experience in every sector or branch (for example, chemicals, construction, steel, mining, IT services, packaging, media, telecoms services, electricity, water or healthcare).

### Some Cinven Investment between 1996-1998

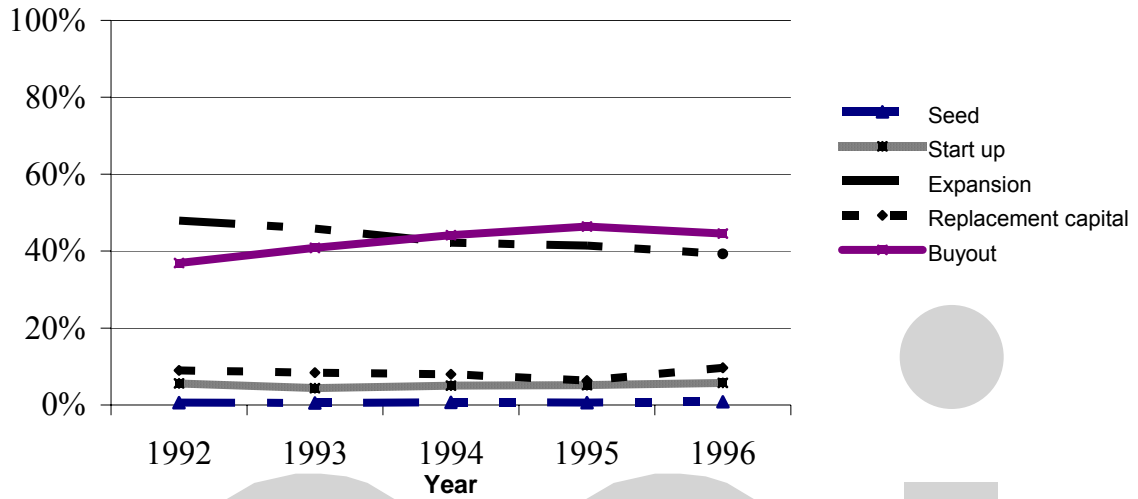
Investes company	Deal size million euros	Activity	Date
Routledge	45	Academic Publishing	June 1996
Newsquet	488	Regional newspapers	December 1996
Vector Industries	346	Manufacturing&distribution	December 1996
CFS	240	Food proceesing equipment	February 1997
Générale de Santé	725	Private Healthcare	July 1997
General Healthcare Group	998	Private Healthcare	July 1997
IPC	1376	Consumer magazines	January 1998

This Venture Capitalist seeks to invest in good quality businesses with strong market positions. Their financial strategy is to help the managers of the companies in which they invest to drive the development of their business over the long term, though organic growth and acquisitions, by providing them with resources, financial and other, such as advice, contacts, image, etc.

They do not finance companies at any stage. They look for good quality businesses with strong market positions and the opportunity to significantly increase their profitability. In other words, they do not invest in start-ups, they look for more developed companies. In addition, those companies have to be headquartered in Europe.

The European trend during the period 1992-1996 was to increase the number and the amount of funds invested in financing Buyouts. Cinven specialized in highly leveraged buyouts.

### European Venture Capital disbursements by stage of financing



Source: European Venture Capital Association (1997)

- Directors' ownerships: managers should have the same goals as shareholders. Directors' ownership in the company is a tool to converge goals with the shareholders, so the directors are committed to business growth, profitability, integrity and professionalism.

#### Simoco Shareholders:

<b>Directors: 10%</b>
<b>Cinven (Venture Capitalist): 90%</b>

Ian McKenzie selected the team which would lead Simoco in this new adventure. He knew some directors because they had worked with him in Philips Mobile Radio, the company that would change its name to Simoco.

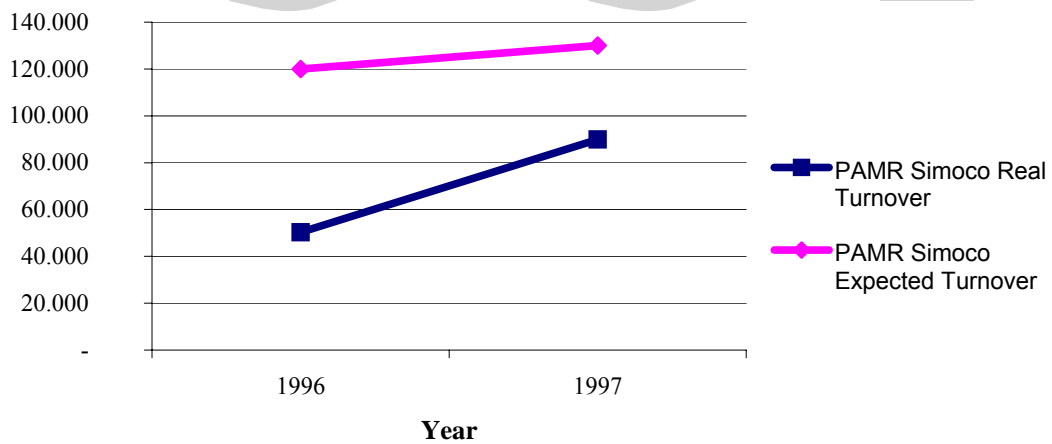
During 1996 and 1997 the results from the PAMR were not what they expected. They planned on getting resources from the PAMR business in order to invest in the development of TETRA network. The results were different.

### Expected vs Real Turnover



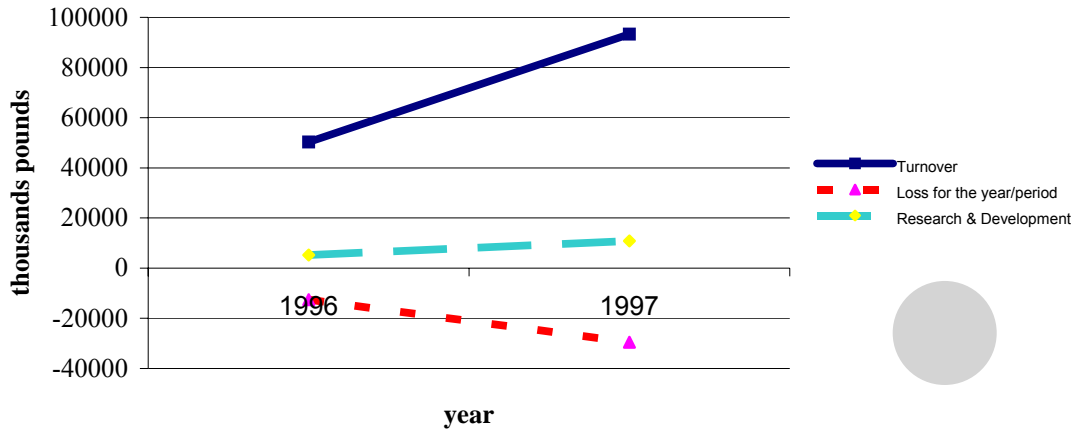
This unexpected decrease in the PAMR business line lead to losses in 1996 and 1997. Not only the decrease in sales resulted in operating losses but also the large investment in research and development affected the cash flow.

### Real vs Expected Analogued Turnover

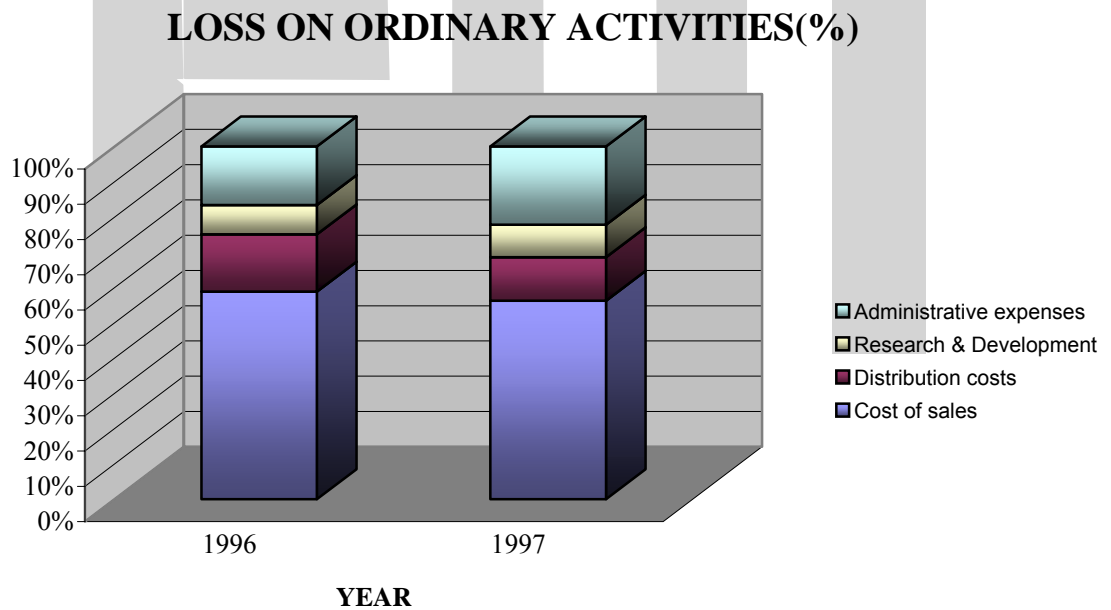




### Turnover vs Losses



The distribution of the operating expenses which Simoco had in this period is shown below:

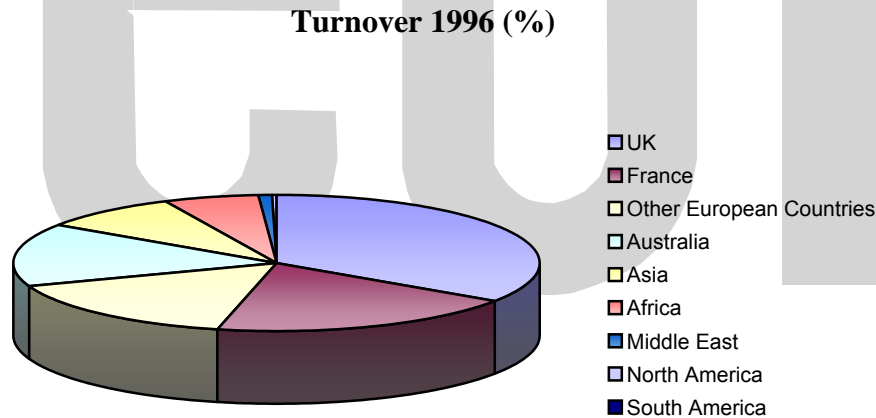


The company reduced the cost of sales and the distribution cost (in percentage) in 1997. Simoco increased the R&D expenses, because of the need to get results from the TETRA system.

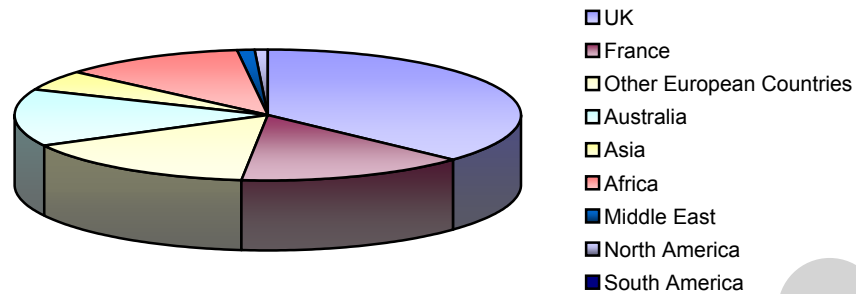
The Directors were worried about the expenses control. They knew that they no longer were part of a multinational company like Philips. Philips had enough financial or capacity to obtain credit, to inject money at the time the company needed it. After the MBO, the firm would have to generate enough cash and manage it efficiently in order to face all the financial and payment requirements.

Managers began to implement strategies to obtain the cash needed. It was an essential step for the success of Simoco, because a cash strangling could have terrible effects on the business.

Simoco is present in more than 36 markets, but its turnover is generated in just a few of them. Their key market is the UK one, where the company began its activity, not only because of its size and their share of it, but for strategic reasons. In addition, they have a high presence in Australia and France:



### Turnover 1997(%)

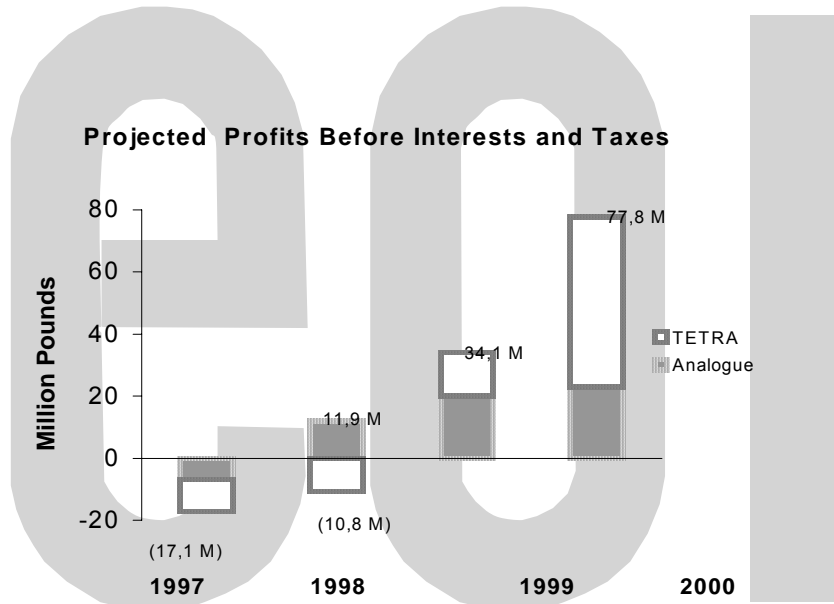
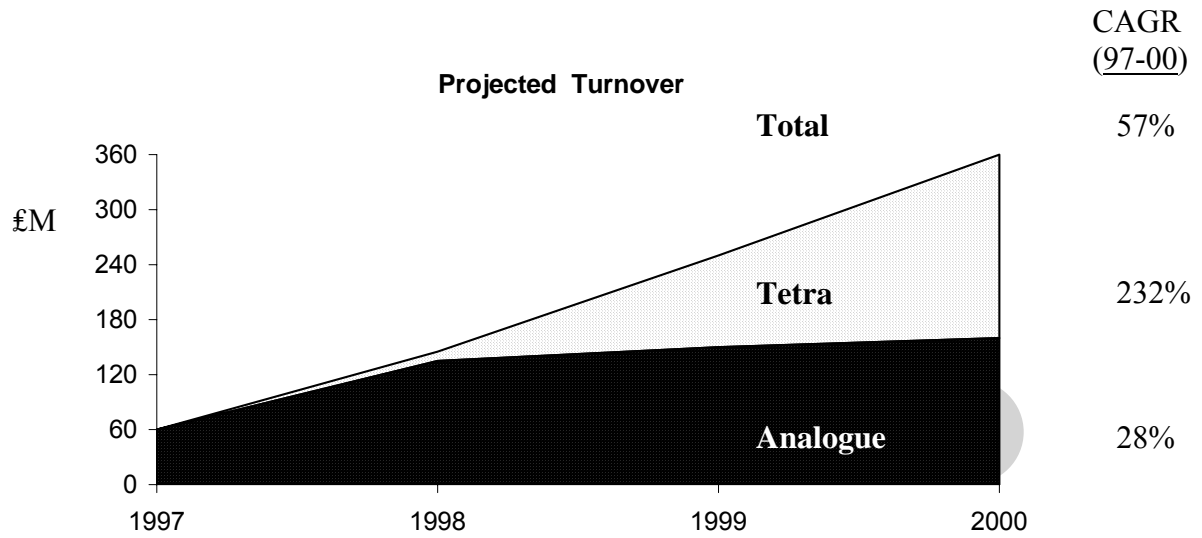


TETRA's development is the main managerial goal. Managers believe that the new mobile radio technology will change the market, generating more customers and increasing the requirements.

In a management meeting during the summer of 1997, the technical director stated that the new network would be developed in 1998, so the company would get an advantage in this new market.

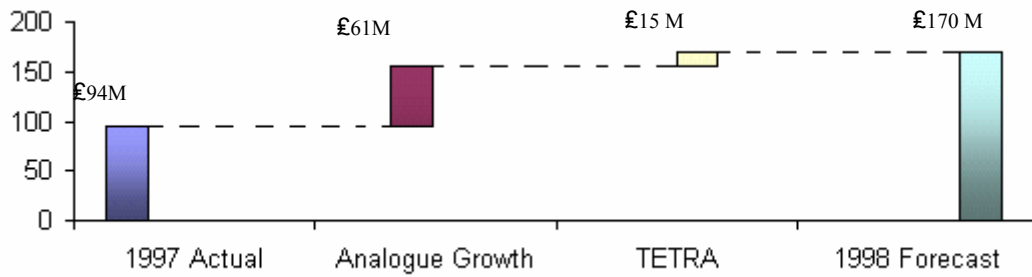
The Group Forecast for the next years, made by Bain&Co<sup>10</sup>, anticipated an enormous success from the new technology, that would open excellent opportunities in the market. Bain consultants had a meeting with the managers of Simoco, in order to establish the company goals and the strategy it should follow in the coming years. They had other meetings with the financial and technical directors, because Simoco's success was based on the improvement of the new technology and the capability to afford the expenses to develop it. During three months Bain consultants estimated potential results from market expectations about TETRA, analysed the strength and weaknesses of the company and the probability of success if essentially focusing on the new product development, according to managers' vision.

<sup>10</sup> Bain&Co is one of the top leaders in consulting, having experience in almost all the sectors.

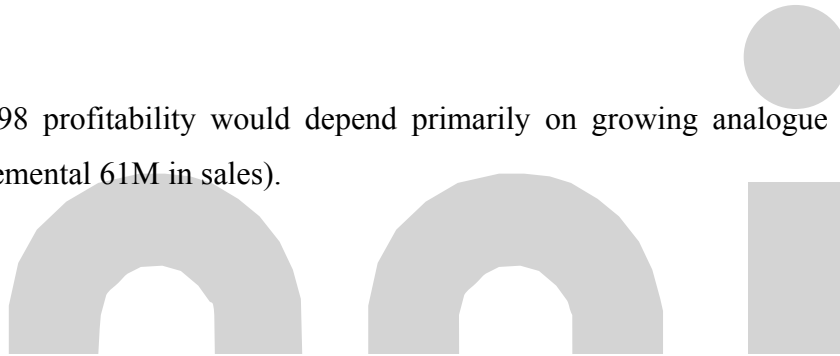


	1997	1998	1999	2000
<b>Gross Margin</b>				
Analogue	30%	27%	24%	24%
TETRA	NA	24%	38%	43%
<b>Profit Margin</b>				
Analogue	-7%	8%	10,20%	12%
TETRA	NA	-72%	19%	32%

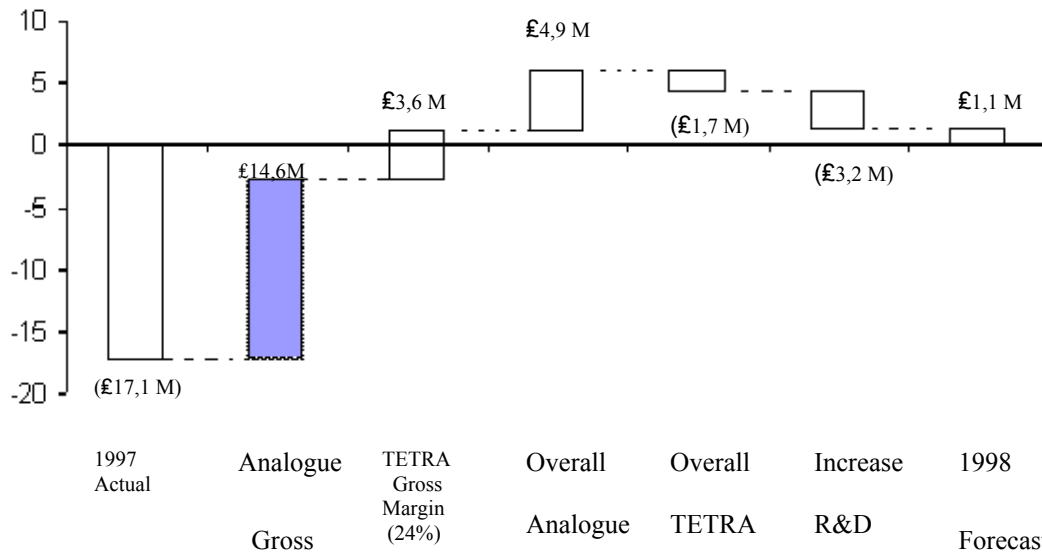
The projected turnover growth for 1998 is positive, based on the evolution of the TETRA new technology. Managers knew that this new technology would increase customers' satisfaction, offering them more sophisticated product. That would lead to strong company growth and better financial results.



Achieving 1998 profitability would depend primarily on growing analogue sales by 65% ( an incremental 61M in sales).



**PBIT Improvement**



\* 84% is TETRA R&D

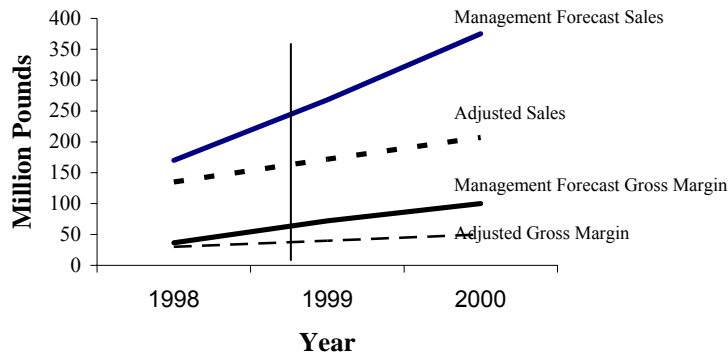
Simoco management projected a significant turnaround for the next year. This would lead to a sales growth of 81%, generating £170M in 1998, and a growth of 48% p.a., generating £268M and £375M in 1999/2000. The 1998 turnaround would be based on a significant sales growth (65%) in the analogue business: UK products (122%), UK Branch (76%), UK Systems (110%) and the Rest of Asia (400%).

Assumptions were made for the sales and profits in 1999/2000. Firstly, Simoco would capture the 30% share of the rapidly expanding Tetra market (+122% p.a.) achieving sales of £165M, profits of £53M and a 32% ROS in 2000. Secondly, in the analogue business, Simoco sales would grow in Rest of Pacific (63% p.a.) and Eastern Europe (45% p.a.).

Because management were so optimistic about the future evolution of the company, the consultants presented an alternative less optimistic scenario, assuming that Simoco's overall sales and profit growth would not be so aggressive. In the adjusted projection sales should grow by 44%, generating £135M in 1998, and by 24% p.a., generating £172M and £207M in 1999/2000. ROS should improve from -18% in 1997 to -5% in 1998 to 10.5% in 2000. In addition, Simoco should achieve its 1998 analogue UK systems, UK Branch and IRIS sales forecasts. However all other business units would probably deliver lower sales than current forecasts predicted.

Finally, 1999/2000 Tetra sales should grow by 151% p.a., deliver sales of £63M, profits of £9.5M and a 15% ROS in 2000. This was based on the overall Tetra market growth of 75% p.a., with an effective market delay of 1 year, and Simoco achieving a 18% share in 2000.

### Projected Analogue P&L Budget

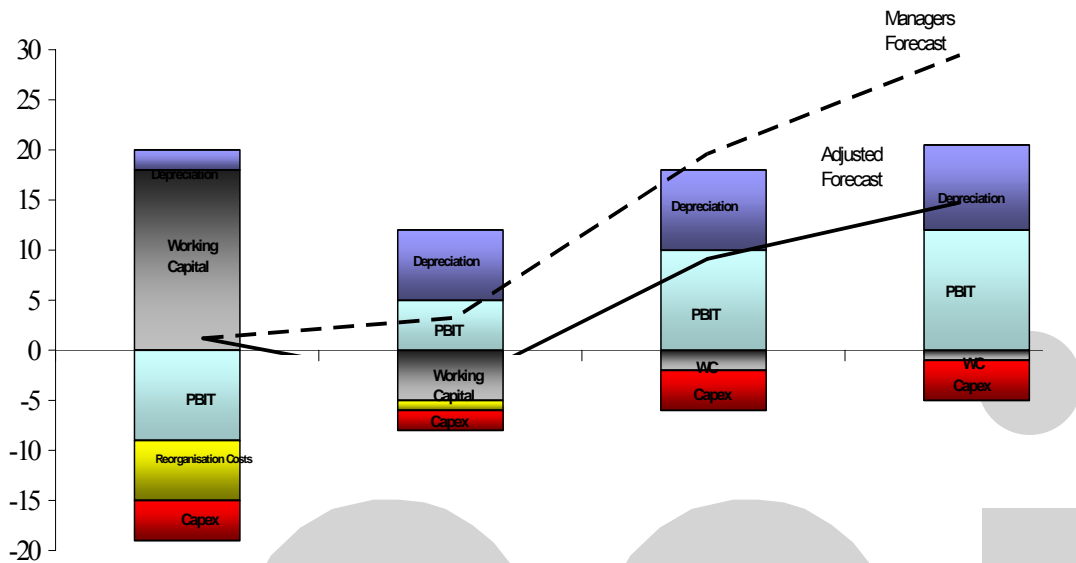


The business success would be due to the power to generate cash flows. In other words, “Cash is King”<sup>11</sup>. Simoco needed to generate enough cash to carry out all the payments it had to do. For that reason, it was important to budget the net cash flow that the company expected to obtain in the coming years, due to the old product (PAMR) and the new product (digital). Even with the adjusted scenario, Simoco would generate enough money, taking in account that during 1997 and 1998 the company would be carrying out a reorganisation process, trying to adapt its structure to the environment requirements.

This first graphic shows the adjusted analogue cash flow, comparing management expectations with the adjusted consulting version. In both cases, the results would be positive and the company would obtain, in the more conservative estimate, a reasonable level of cash flow in the analogue business line.

<sup>11</sup> October 1, 1974 Wall Street Journal: “A lot of executives apparently believe that if they can figure out a way to boost reported earnings, their stock prices will go up even if the higher earnings do not represent any underlying economic change. In other words, the executives think they are smart and the market is dumb... The market is smart. Apparently, the dumb one is the corporate executive caught up in the earnings-per-share mystique”

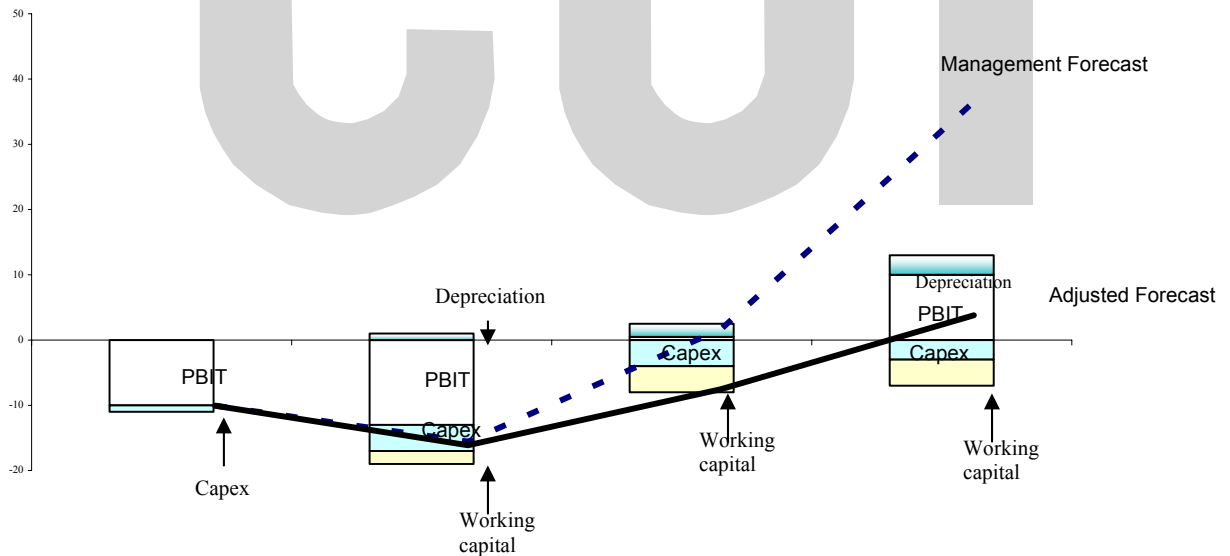
### Adjusted Projected Analogue Cash Flows



<b>NET CASH FLOW</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>
Management Forecast	3,7	5,3	18,1	25,8
Adjusted Forecast	3,7	0	9,9	14,3

This second graphic is the adjusted Tetra cash flow:

### Adjusted Projected Tetra Cash Flows

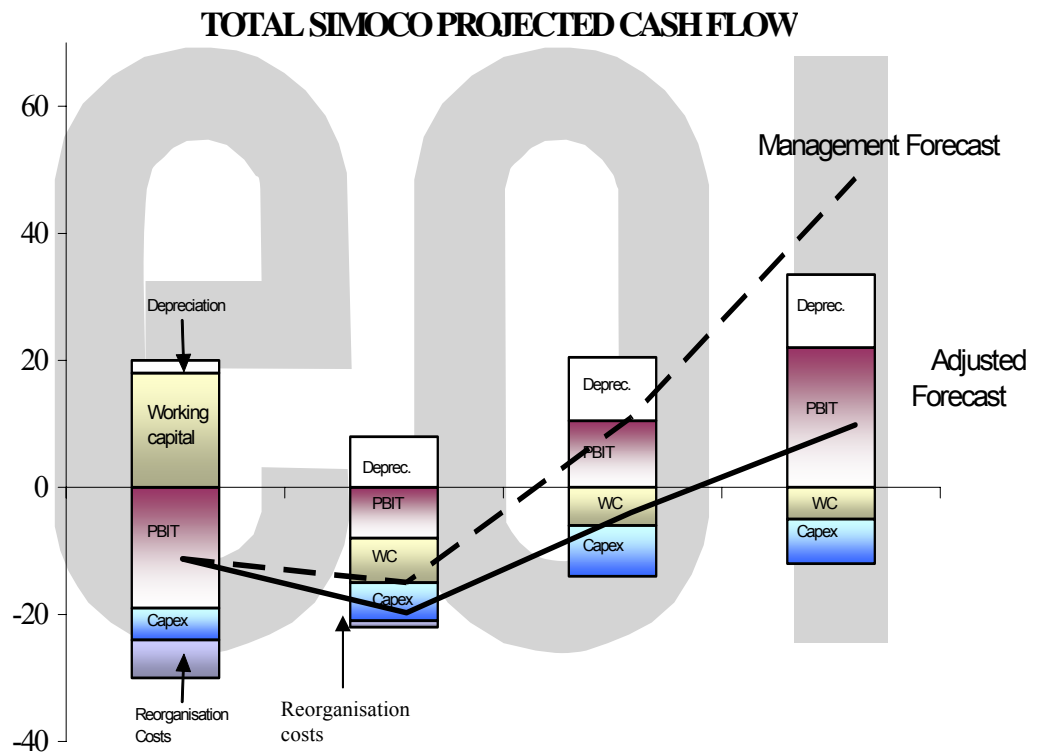


<b>NET CASH FLOW</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>
Management Forecast	-10,9	-17,1	2,2	41,2
Adjusted Forecast	-10,9	-17,7	-8,1	4,6



The adjustment in the expectations about Tetra success would reduce Simoco's cash flows in the coming years. Research and Development expenses (R&D) were underestimated, producing an increase in management cash flows projections. However, consultants estimated that the expenses had to raise in order to get the product, the digital mobile radio. This is one of the main factors to explain the negative cash flows obtained until 2000, year in which the company expected to have a positive cash flow.

Simoco's added cash flow, taking in account the two business lines would be:



<b>NET CASH FLOW</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>
Management Forecast	-7,2	-11,8	20,3	67
Adjusted Forecast	-7,2	-17,7	1,8	18,9

Even in the more pessimistic scenario estimated by Bain&Co, in which the company would not achieve the management expected cash flows, the cash flow for the year 2000 would be £18,9M.

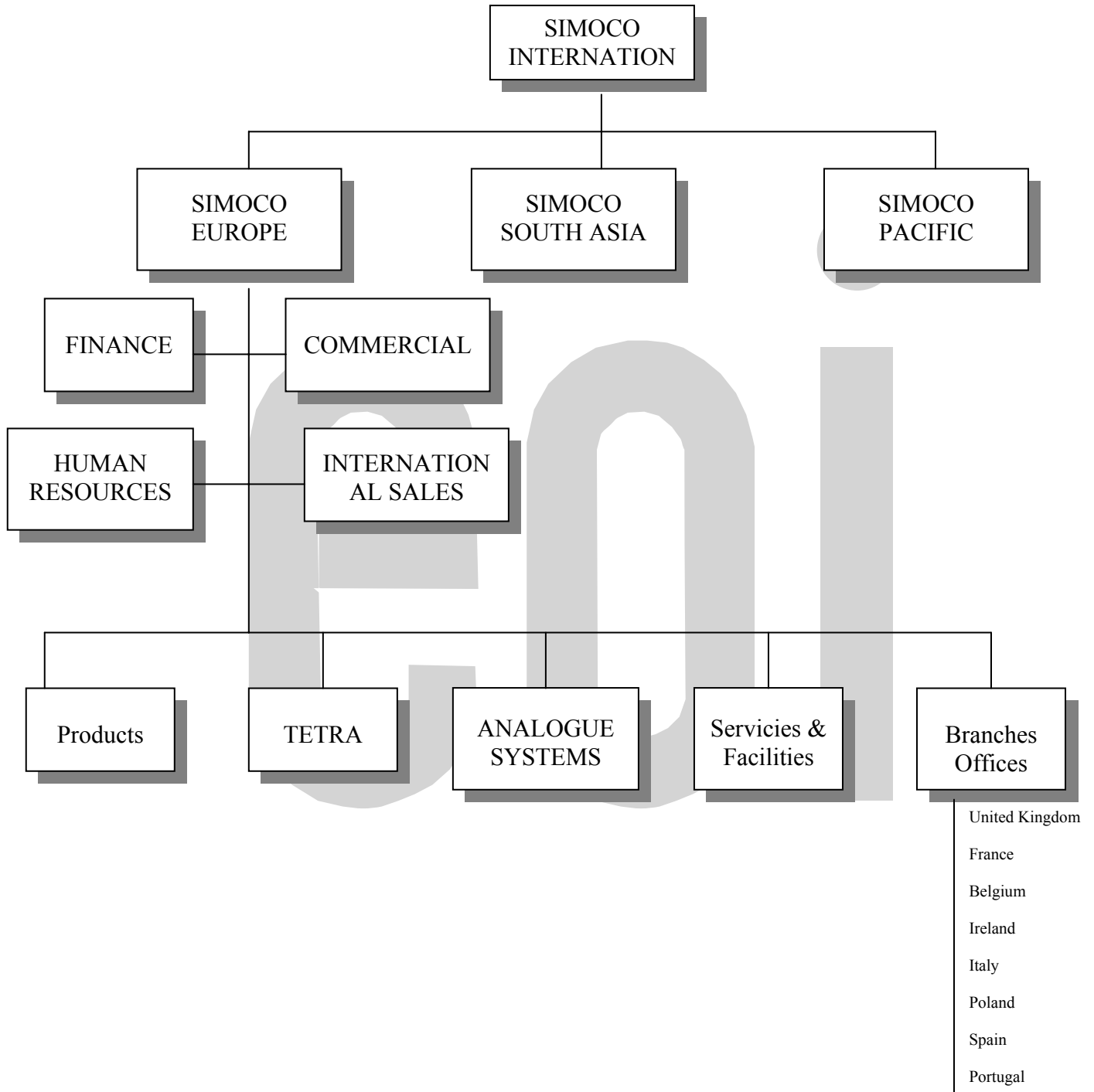
After the forecast meeting in May 1998, the company directors increased their belief in the evident future success of Simoco. The new product, the digital mobile radio, based on the Tetra network, was an enormous opportunity which would foster growth.

Simoco was a small multinational with offices around the world and the new product would launch the company to become the leader in his product segment.

Will Simoco be the successful company everybody thinks?

eoi

**APPENDIX I: SIMOCO ORGANISATION.**

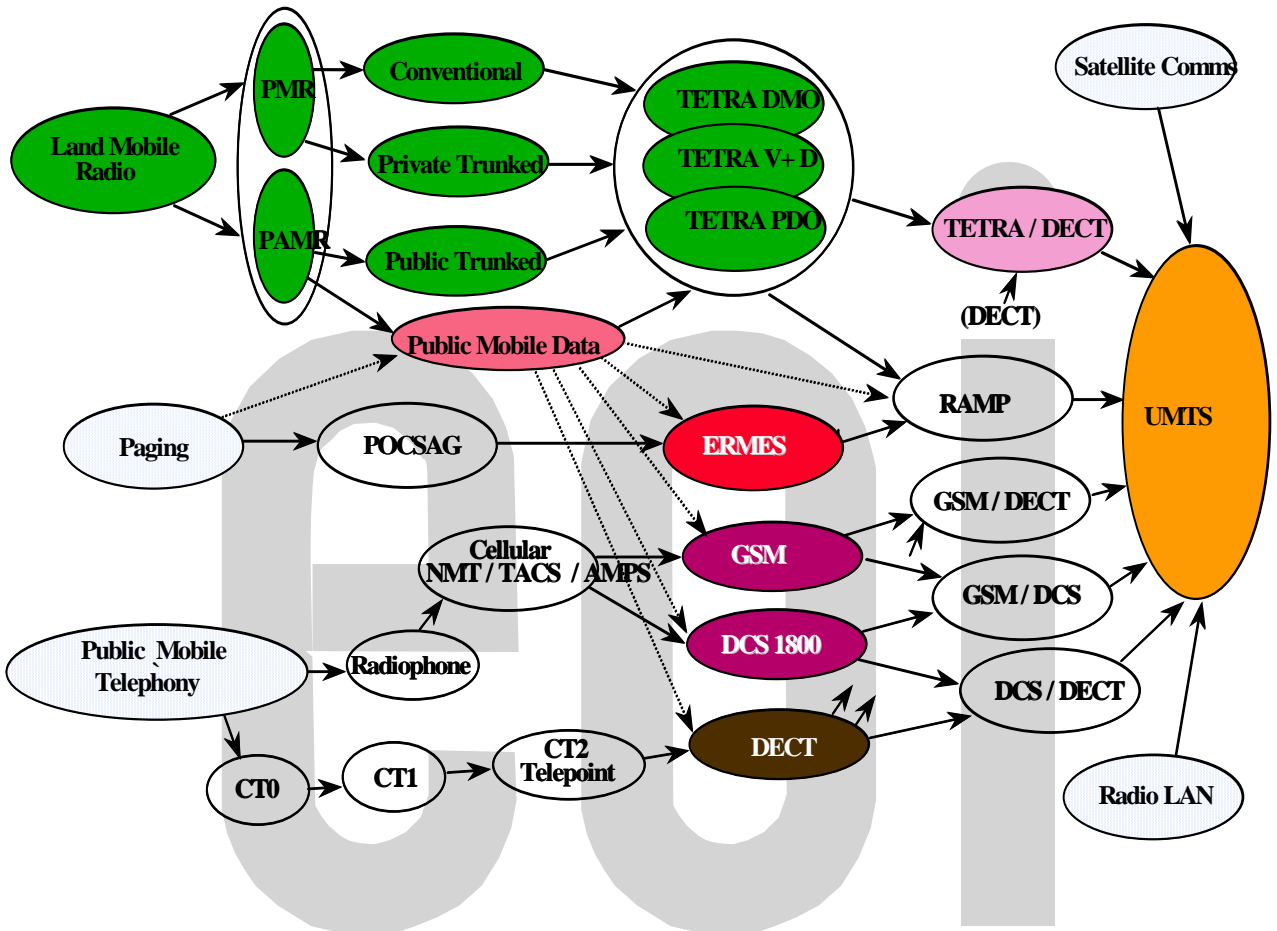


## APPENDIX II: CURRENT MAIN TETRA SUPPORTERS.



### APPENDIX III: THE MOBILE RADIO INDUSTRY (TETRA).

#### Trends in wireless technology



## APPENDIX IV: SIMOCO MAIN CONTRACTS.

Many major contracts have been gained all around the world, which helped establish the company as a world leader in radio mobile communications:

<p><b>WMAS:</b> the West Midlands Ambulance Service. NHS was the first TETRA user in Britain, and they specified a Simoco system. The equipment dramatically improved co-ordination between ambulance crews and headquarters, thus improving patient care. Apart from quick call set-up times, high speech quality and data transfer, Simoco provided a video link system between ambulances and hospitals. As the second largest ambulance service in the UK, WMAS has 29 ambulance stations and a fleet of more than 300 vehicles that handle around 300,000 emergency calls each year.</p>	<p><b>EDF:</b> Electricité de France is the major electricity provider in the country. They have invested £16 million in a state-of-the-art communications system that enables 1,400 field engineers to serve their customers better. The new network covers the South of France. Simoco's business based in Rouen, specialised in nationwide radio systems, has delivered coverage to EDF for the southern part of the country.</p>
<p><b>Norfolk Fire</b> chose Simoco to entirely revamp its mobile voice and data communications system in a deal worth £2 million. The Brigade's central control system is linked to on-board data systems on the fire appliances. Critical information can be sent directly to fire-fighters at the scene of an incident ensuring that they are prepared to tackle the emergency in the most appropriate way.</p>	<p><b>Belgian Gendarmerie</b> has selected Simoco equipment and enlisted the company's engineering expertise to expand its highly advanced national communications network. It provides two-way voice and data communications between control centres and gendarmes out on the road.</p>
<p><b>Perth Taxis:</b> The entire fleet of taxis in Perth, Australia, has been fitted with Raywood's SnapShot security cameras. The camera uses digital technology, infrared lighting and a single-angle lens to take clear pictures of the entire cab interior, even at night. Pictures are transferred over the air to the police, helping them to identify anyone attacking a taxi driver.</p>	<p><b>Stade de France:</b> Simoco has been chosen to design and construct a communication system for the Football World Cup in 1998. It will ensure that all the different radio systems being used by the emergency services are co-ordinated via a single control centre. The system allows all the emergency and security forces to co-ordinate activity, maintaining contact both inside and outside the stadium. Simoco will use its confined space engineering techniques to give complete coverage even in the underground service roads. The success of this contract will prove the capacity of Simoco for designing specialised systems on demand and integrating them into networks that already exist. The company started applying these techniques in a TETRA development, conducting tests with a TETRA network on the Hanover metro.</p>

## APPENDIX V: SIMOCO FINANCIAL STATEMENTS.

### CONSOLIDATED BALANCE SHEET (as at 31 December 1997)

<i>Notes</i>	1997 Pounds'000	Group 1996 Pounds'000	1997 Pounds'000	Company 1996 Pounds'000
<b>Fixed assets</b>				
10 Tangible assets	20219	18.951	0	0
11 Investments	375	0	21.520	26.935
	20594	18.951	21.520	26.935
<b>Current assets</b>				
12 Stocks	17987	19.662	0	0
13 Debtors	32934	33.408	40.956	10.664
25 Cash at bank and in hand	5019	3.258	0	0
	55940	56.328	40.956	10.664
<b>Creditors due within one year</b>				
14 Finance debt	-24353	-7131	-21934	-153
14 Other creditors	-50153	-34565	-14404	-10224
14	-74506	-41696	-36338	-10377
<b>Net current assets</b>	-18566	14.632	4.618	287
<b>Total assets less current liabilities</b>	2.028	33.583	26.138	27.202
<b>Creditors due after more than one year</b>				
15 Finance debt	-19635	-18526	-19268	-18095
15 Other creditors	-255	-2		0
15	-19890	-18528	-19268	-18095
18 Provisions for liabilities and charges	-3180	-6141,4	0	0
	-21.042	8.914	6.870	9.107
<b>Capital and reserves</b>				
Called up share capital:				
19 Equity interest	1.206	890	1.206	890
19 Non equity interest	4.575	4.575	4.575	4.575
	5.781	5.465	5.781	5.465
Share premium account:				
20 Equity interest	926	0	926	0
20 Non equity interest	4.575	4.575	4.575	4.575
	5.501	4.575	5.501	4.575
20 Other reserves	10.306	12.214	0	0
20 Profit and loss account (including non equity)	-42906	-13562	-4412	-933
<b>Shareholders' funds</b>	-21.318	8.692	6.870	9.107
<b>Minority interest-equity</b>	276	222	0	0
	-21.042	8.914	6.870	9.107

CONSOLIDATED PROFIT AND LOSS ACCOUNT 1997 (for the year ended December 1997)						
Notes	1997			1996		
	Before Exceptional items. Pounds '000	Exceptional items (Note 4). Pounds '000	Pounds '000	Before Exceptional items. Pounds '000	Exceptional items (Note 4). Pounds '000	Pounds '000
	<b>Turnover</b>					
	89,928	0	89,928	50,290	0	50,290
	3,403	0	3,403	0	0	0
	93,331	0	93,331	50,290	0	50,290
	<b>Discontinued operations</b>					
	481	0	481	458	0	458
1,2	93,812	0	93,812	50,748	0	50,748
	-66,204	0	-66,204	-37,051	0	-37,051
2	27,608	0	27,608	13,697	0	13,697
	-14,259	-296	-14,555	-9,787	-448	-10,235
	-10,825	0	-10,825	-5,217	0	-5,217
	-20,660	-5,414	-26,074	-9,948	-505	-10,453
	273	0	273	206	0	206
1,2	-17,863	-5,710	-23,573	-11,049	-953	-12,002
3	<b>Net interest payable and other similar charges</b>					
			-5,391			-782
2	<b>Loss on ordinary activities before taxation</b>					
			-28,964			-12,764
7	<b>Tax on loss on ordinary activities</b>					
			-532			-127
	<b>Loss for the year/period after taxation</b>					
			-29,496			-12,911
	<b>Minority interests</b>					
			-54			366
	<b>Loss for the year/period</b>					
			-29,550			-12,545
8	<b>Undeclared non-equity preference dividend</b>					
			-761			-366
20	<b>Retained loss for the year/period</b>					
			-30,311			-12,911



**CONSOLIDATED CASH FLOW STATEMENT**

<i>Notes</i>		1997		1996
	Pounds'000	Pounds'000	Pounds'000	Pounds'000
21	<b>Net cash outflow from operating activities</b>		-11020	-11.708
	<b>Returns on investments and servicing of finance</b>			
	Interest received	28		14
	Interest paid	-1303		-112
	Interest element of finance lease rental payments	-5		-2
			-1280	-100
	<b>Taxation</b>			
	UK corporation tax received	0		22
	Overseas corporation tax paid	-16		0
	Tax Paid		-16	22
	<b>Capital Expenditures and financial investment</b>			
10	Purchase of tangible fixed assets	-4611		-1822
	Sale of tangible fixed assets	222		56
		-4389	0	-1766
	<b>Acquisitions and disposals</b>			
22	Purchase of business and subsidiary undertaking	-5209		-17956
	Purchase of investments	-375		0
			-5584	-17956
	<b>Financing</b>			
	Issue of share capital	1242		890
	Issue of non-equity shares	0		9150
	Deep discount bonds issued	21768		6500
	Other loans raised	-900		11095
24	<b>Net cash inflow from financing</b>		22110	27635
25	<b>Decrease in cash</b>		-179	-3493

## NOTES TO THE ACCOUNTS.

1 SEGMENTAL ANALYSIS 1a. By geographical origin	Turnover		Operating (loss)/profit		Net (liabilities)/assets	
	1997	1996	1997	1996	1997	1996
	Pounds'000	Pounds'000	Pounds'000	Pounds'000	Pounds'000	Pounds'000
UK	51207	24875	-20588	-10191	-30016	113
France	13560	10092	235	128	2685	3181
Other European Countries	10003	4978	222	-162	2582	1181
Australia	14256	7721	-2344	-783	3076	3496
Asia	4305	2624	-444	-717	482	776
TOTAL	93331	50290	-22919	-11725	-21191	8747
<b>Discontinued Operations</b>						
Other European Countries	481	458	-184	-21	149	167
TOTAL	93812	50748	-23103	-11746	-21042	8914

1 SEGMENTAL ANALYSIS 1b. By geographical markets supplied	Continuing turnover		Discontinued turnover		Total turnover	
	1997	1996	1997	1996	1997	1996
	Pounds'000	Pounds'000	Pounds'000	Pounds'000	Pounds'000	Pounds'000
UK	34784	17455	0	0	34784	17455
France	13558	9726	0	0	13558	9726
Other European Countries	14122	7621	481	458	14603	8079
Australia	13378	7622	0	0	13378	7622
Asia	4632	4354	0	0	4632	4354
Africa	11118	2933	0	0	11118	2933
Middle East	860	484	0	0	860	484
North America	879	57	0	0	879	57
South America	0	38	0	0	0	38
TOTAL	93331	50290	481	458	93812	50748

2. LOSS ON ORDINARY ACTIVITIES BEFORE TAXATION	Continuing Operations	Discontinued Operations	Total	Continuing Operations	Discontinued Operations	Total
	1997	1997	1997	1996	1996	1996
	Pounds'000	Pounds'000	Pounds'000	Pounds'000	Pounds'000	Pounds'000
Turnover	93331	481	93812	50290	458	50748
Cost of sales	-65812	-392	-66204	-36698	-353	-37051
Gross profit	27519	89	27608	13592	105	13697
Distribution costs	-14282	-273	-14555	-10121	-114	-10235
Research & Development	-10825	0	-10825	-5217	0	-5217
Administrative expenses	-26074	0	-26074	-10441	-12	-10453
Other operating income	273	0	273	206	0	206
Operating loss	-23389	-184	-23573	-11981	-21	-12002
<b>Loss on ordinary activities before taxation is stated after charging:</b>					<b>1997</b>	<b>1996</b>
Staff costs (note 5)					Pounds'000	Pounds'000
Depreciation					41297	20,583
R&D expenditures					2906	1,536
<b>Operating leases:</b>					10825	5,217
hire of plant and machinery						793
rental of land and buildings						333
<b>Auditor's remuneration:</b>					1479	309
audit-group						171
audit-company						121
other services						20
Foreign exchange losses						102
Exceptional items (note 4)						593
Profit on disposal of business (including Pounds204,000 of goodwill previously set off against reserves)						0
						314
						5710
						953
						142
						0

**3. NET INTEREST PAYABLE AND SIMILAR CHARGES**

	1997	1996
	Pounds'000	Pounds'000
<b>Interest payable and similar charges</b>		
On bank loans, overdrafts and other loans wholly repayable within five years	3246	498
On deep discount bonds	2186	298
	5432	796
<b>Interest receivable</b>	-41	-14
<b>Net interest payable</b>	5391	782

**4 EXCEPTIONAL ITEMS**

	1997					1996
	Distribution expenses	Administration expenses	Total	Distribution expenses	Administratio n expenses	Total ('000)
	Pounds'000	Pounds'000	Pounds'000	Pounds'000	Pounds'000	Pounds'000
Redundancies and restructuring	0	4036	4036	0	505	505
Site move costs	0	1378	1378	0	0	0
Launch costs	296	0	296	448	0	448
<b>TOTAL</b>		5414	5414	448	505	953

**5 STAFF NUMBERS AND COSTS**

	<b>1997</b>	<b>1.996</b>
	Pounds000	Pounds000
Management and administration	213	185
Selling and distribution	529	382
Production	923	1051

**At 31 December 1997 the Group expoyed:**

1607	1668
------	------

**The aggregate payroll costs were:**

	<b>1997</b>	<b>1.996</b>
	Pounds000	Pounds000
Wages and salaries	35663	18192
Social security costs	4326	2103
Other pension costs	1308	288
	41297	20583

**6 DIRECTORS' REMUNERATION AND EMOLUMENTS**

	<b>1997</b>	<b>1.996</b>
	Pounds000	Pounds000
Aggregate emoluments	613	114
Company contributions to funded unapproved retirement benefit schemes	59	0
Sums paid to third parties for director's services	8	8
Compensation for loss of office	115	0

**Highest paid director**

	<b>1997</b>	<b>1.996</b>
	Pounds000	Pounds000
Aggregate emoluments	355	83

**7 TAX ON LOSS ON ORDINARY ACTIVITIES**

	<b>1997</b>	<b>1.996</b>
	Pounds000	Pounds000
Based on the loss for the period		
UK corporation tax at 31.5% (1996:33%)	532	54
Overseas tax	0	73
Deferred tax	532	127
<b>TOTAL</b>		

**8 DIVIDENDS ON NON-EQUITY SHARES**

	<b>1997</b>	<b>1.996</b>
	Pounds000	Pounds000
Undeclared Preference dividends 8% per annum (net compounded annually)	761	366

The appropriation in respect of non-equity shares of 761.000 (1996: 366.000) represents the amount by which the finance cost of the Preference shares, charged at a constant annual interest rate over the period, is payable on redemption of the shares.

**9 SIMOCO INTERNATIONAL LIMITED PROFIT AND LOSS ACCOUNT**

Simoco International Limited has not presented its own profit and loss account as permitted by Section 230 of the Companies Act 1985. The loss for the financial period recorded in the accounts of the parent undertaking is 4.240.000 (1996: 1.299.000)

**10 TANGIBLE FIXED ASSETS**

	<b>Land and buildings</b>	<b>Long leasehold</b>	<b>Short leasehold</b>	<b>Plant and equipment</b>	<b>Total</b>
	Freehold ('000)	Freehold ('000)	Freehold ('000)	Freehold ('000)	Freehold ('000)
<b>Cost</b>					
At 1 January 1997	18179	247	4343	22661	45430
Business acquires	0	0	0	429	429
Exchange adjustments	-81	-16	-1	-799	-897
Additions	857	88	143	3523	4611
Disposals	-6	-5	0	-896	-907
At 31 December 1997	18949	314	4485	24918	48666
<b>Depreciation</b>					
At 1 January 1997	-8113	-11	-1.720	-16.635	-26.479
Business acquired	0	0	0	-180	-180
Exchange adjustments	12	0	1	487	500
Charge for the year	-529	-25	-204	-2.148	-2.906
Disposals	6	4	0	608	618
At 31 December 1997	-8624	-32	-1923	-17.868	-28.447
<b>Net book amount</b>					
At 31 December 1997	10325	282	2562	7050	20219
At 31 December 1996	10066	236	2623	6026	18951

**Freehold land and buildings comprise:**

	<b>1997</b>	<b>1.996</b>
	Pounds000	Pounds000
Freehold land	4465	4004
Freehold buildings	5860	6062
	10325	10066

The net book value of assets held under finance leases and disclosed in plant and equipment is;  
The amount of depreciation charged on these assets during the year was;

575.000 (1996: 21.000)
43.000 (1996:10.000)

**11 FIXED ASSET INVESTMENTS IN SUBSIDIARY UNDERTAKING**

	<b>Equity</b>	<b>Loans</b>	<b>Company Total</b>
	Pounds000	Pounds000	Pounds000
At 1 January 1997	20144	6791	26935
Revised consideration	-3695	0	-3695
Loans repaid	0	-1504	-1504
Business acquired	100	0	100
Disposals	-316	0	-316
At 31 December 1997	16233	5287	21520

During the year the disposals from the Company transferring equity shareholdings in Simoco Benelux S.A. Simoco España S.A. And Simoco Italia S.R.L. to another Group Company.

**Fixed asset investments in associated undertakings**

	<b>Group</b>
	Pounds000
At 1 January 1997	0
Acquisitions	375
At 31 December 1997	375

On 29 December 1997 the Group acquired a 20% investment in Repart-Sistemas de Comunicação de Recursos Partilhados S.A. a company incorporated in Portugal. This Company is the second largest network operator in Portugal.

**12 STOCKS**

	<b>1997</b>	<b>Group 1996</b>
	Pounds000	Pounds000
Raw materials and consumables	6501	5,013
Work in progress	4365	3,341
Finished goods and goods for resale	7121	11,308
TOTAL	17987	19,662

**13 DEBTORS**

	<b>1997</b>	<b>Group 1996</b>	<b>1997</b>	<b>Company 1996</b>
	Pounds000	Pounds000	Pounds000	Pounds000
Trade debtors	25153	29192	0	0
Amounts owed by Group undertakings	0	0	40717	10644
Others debtors	4995	3036	172	0
Prepayments and accrued income	2786	1180	67	0
	32934	33408	40956	10644

Included in other debtors and trade debtors are the following amounts falling due after more than one year

	355	133	0	0
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**14 CREDITORS: AMOUNTS FALLING DUE WITHIN ONE YEAR**

	<b>1997</b>	<b>Group 1996</b>	<b>1997</b>	<b>Company 1996</b>
	Pounds000	Pounds000	Pounds000	Pounds000
Obligations under finance leases	181	7	0	0
Bank loans and overdrafts	8853	7131	6434	153
Other loans	15500	0	15500	0
Trade creditors	18717	14852	461	0
Bills of exchange	235	250	0	0
Amounts owed to subsidiary undertakings	0	0	10812	10224
Other creditors including taxation and social security:				
UK corporation tax	2	2	0	0
Overseas taxation	566	55	0	0
Other taxes and social security	2364	1454	3	0
Other creditors	6947	6377	3128	0
Accruals and deferred income	21141	11568	0	0
TOTAL	74506	41696	36338	10377

**15. Credits: amounts falling due after more than one year**

	<b>1997</b>	<b>Group 1996</b>	<b>1997</b>	<b>Company 1996</b>
	Pounds000	Pounds000	Pounds000	Pounds000
Obligations under finance leases	255	2	0	0
Bank loans	367	431	0	0
Philips loan	0	11297	0	11297
Deep discount bonds	19268	6798	19268	6798
TOTAL	19890	18528	19268	18095

**16 OBLIGATIONS UNDER FINANCE LEASES (NET OF FINANCE CHARGES)**

	<b>1997</b>	<b>Group 1996</b>
	Pounds000	Pounds000
Due within one year	181	7
Due after more than one year	0	0
Between two and five years	255	2
TOTAL	436	9

**17. Bank and other loans, deep discount bonds and overdrafts**

	Group ('000)	Company ('000)
Due within one year	7,131	153
Due after more than one year:		
Between one and two years	57	0
Between two and five years	11,620	11,297
Five years or more	6,849	6,798
	18,526	18,095
<b>TOTAL</b>	<b>25,657</b>	<b>18,248</b>

**18. Provisions for liabilities and charges**

	Warranty Provisions	Reorganisation provisions	Retirement provisions
Business Acquired	-1,205	-4,433	-541
Utilised during the period	55	1,199	0
Charge for the period in P&L statement	0	-887	-217
At 31st December 1996	-1,150	-4,121	-758

**19. Called up share capital**

	Group and Company	Issued and fully paid
Equity Shares		
Ordinary shares of 1 pound each	1,000	890
Non-equity		
Preference shares of 50p. each	9,075	4,575
<b>TOTAL</b>	<b>10,075</b>	<b>5,465</b>

Ordinary shares were issued for cash at their nominal value during the period, with the Preference shares issued at a premium of 4,575,000. The Ordinary shares carry full voting rights.

The Preference shares earn dividends at the rate of 8.0% per annum net (compound annually), payable on redemption. The Preference shares will be redeemed by the Company on the occurrence of certain events, as set out in the Company's Articles of Association, but otherwise as follows

	Unredeemed shares in issue to be redeemed
31st December 2001	33%
31st December 2002	50%
31st December 2003	100%

The Preference shares do not normally carry any voting rights but rank ahead of the Ordinary shares with regard to dividend rights and return on assets on liquidation.

**20. Reserves**

	Share Premium ('000)	Group P&L Statement	Other Reserves
Premium arising during the period	4,575		0
Loss for the period retained		-12,911	0
Currency translation differences		-1,017	0
Goodwill arising on the acquisition of subsidiary undertakings		0	12,214
Undeclared preference dividend		366	0
At 31st December 1996	4,575	-13,562	12,214

	Share Premium ('000)	Group P&L Statement	Other Reserves
Premium arising during the period	4,575	0	0
Loss for the period retained		-1,299	0
Undeclared preference dividend		366	0
	4,575	-933	0

**21. Reconciliation of operating loss to net cash outflow from operating activities**

	'000
Operating loss	-12,002
Depreciation charge	1,536
Loss on disposal of assets	11
Exchange movements on investments in subsidiaries	-380
Movement on retirement provisions	3,406
Decrease in stocks	6,126
Increase in debtors	-5,315
Decrease in creditors	-5,090
Net cash outflow from operating activities	-11,708

**22. Acquisitions**

Acquisition of the Private Mobile Radio business (PMR) on 1st July

	Book value ('000)	Fair value adjustments ('000)	Fair value ('000)
Tangible fixed assets	15,085	3,889	18,974
Stocks	27,176	0	27,176
Debtors	30,225	0	30,225
	72,486	3,889	76,375
			0
Finance debt	-2,443		-2,443
Trade and other creditors	-35,027	-1,929	-36,956
Provisions for liabilities and charges			0
Restructuring provisions raised in previous years	-3,049	0	-3,049
Other provisions	-3,169	0	-3,169
	-43,688	-1,929	-45,617
Net assets acquired	28,798	1,960	30,758
Minority interest			-588
Goodwill transferred to reserves			-12,214
Aggregate cost			17,956
Satisfied by			
Cash consideration			15,991
Acquisition expenses			1,965
			17,956

**24. Analysis of changes in financing for the period**

	Share capital and premium	Loans ('000)	Total ('000)
Cash inflow from financing	10,040	17,595	27,635
At 31st December 1996	10,040	17,595	27,635

**25. Analysis of cash and changes in cash for the period**

	Cash ('000)	Overdraft ('000)	Net ('000)
Net cash inflow (outflow)	3,258	-7,131	-3,873
At 31st December 1996	3,258	-7,131	-3,873

## 6. QUESTIONS.

1.- Simoco is located in a new technology sector, in which a good understanding of the business is essential. Use a SWOT analysis to identify the characteristics and situation of the company from a strategic point of view.

2.- Which are the operating risks assumed by Simoco? Detail them.

3.- Assuming that the company may have cash needs and you are an external financial advisor, which methods would you propose to use in order to obtain enough cash to continue investing in R&D for Tetra development? Take into account that Simoco's financial situation is not a common one.

4.- Analyse the company situation using accounting ratios. What are the main financial features of the company in 1996 and 1997?

5.- Using the adjusted forecast for Simoco and assuming a cash flow, between 2000 and 2002, of £30M, and then a perpetual cash flow of £2M (assuming a zero growth rate), calculate how much the company's worth in January, 1<sup>st</sup> 1998. For that purpose, use the Discount Cash Flow (DCF) method with the cash flows generated at the end of the year. You can use both projections (management and consultants) and compare the deviation in value between them.

Assumptions:

- Risk-free rate= 6%
- Market Risk Premium= 4%
- Analogue unlevered beta = 1.5
- Digital business unlevered beta= 2.5
- Before-Tax Cost of Debt for each division = 12%
- Tax rate = 35%



**ANALOGUE BUSINESS**

	1998	1999	2000	2001	2002	2003
debt	80%	65%	59%	56%	53%	53%
equity	20%	35%	41%	44%	47%	47%
Cash Flow	0	9,9	14,3	12	10,5	0,5

**DIGITAL BUSINESS**

	1998	1999	2000	2001	2002	2003
debt	85%	80%	70%	62%	54%	54%
equity	15%	20%	30%	38%	46%	46%
Cash Flow	-17,7	-8,1	4,6	18	19,5	1,5

Identify the assumptions made when using this method?

