

The National College of Art & Design,  
Faculty of Design,  
Department of Visual Communications,

## The Design Of Telephone Directories

*The development of, and principles concerned with, the design of telephone directories.*

Written By Brenda Evans,

Submitted to the Faculty of History of Art and Design and Complementary Studies in Candidacy for the  
Degree of Bachelor of Design in Visual Communication. 1997



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This thesis topic was initially inspired by an article on Ladislav Sutnar, “who was responsible for the area code parentheses which were designed to demarcate American area code numbers, making the lives of millions of phone users easier.” (SPIEKERMANN, 94’ pp. 10) Ladislav’s contributions to information architecture are milestones, not only in graphic design history, but in the development of design for the public good. The graphic systems he created made accessible vast amounts of complex, usually ponderous, information and transformed routine data into digestible units.

This Thesis will examine the interior page design development of the telephone directory. The cover, prefix or government pages will not be discussed as they require lengthy study and are beyond the scope of this study. It will, however, attempt to articulate typeface design principles for telephone directories partly through the study of typefaces which were specifically developed for this purpose and also, through their use in layouts. These principles will show how telephone directory design varies greatly from that of continuous text. This study will also, question the necessity for a specifically designed typeface for each telephone directory.

If we analyse the problems posed by the typography of a telephone directory we will discover principles of typography which will be intertwined within some of the layouts I have chosen to study.



Unfortunately, many telecommunication companies regard their directories as “just a listing” not realising that an analytical understanding of the performance and mechanics of the information is vital to its successful legibility. I hope to examine the role of professional designers in this area by drawing a comparison between the Dutch, British and the Irish telephone directories, while also analysing whether Telecom Eireann merely adopts typographic elements from Dutch or British designs.

The telephone directory is a catalogue of current telephone users within that telephone network, outdated versions may not be as accurate, therefore are usually discarded and they don't usually inspire collectors. For this reason, I had problems researching and collecting relevant material for this thesis. My research commenced by obtaining current British, Dutch, Swedish and American directories from the Ilac library to see, if indeed, there was any consideration to legibility or evidence of the use of professional designers displayed in their layouts. These, I found, were much more legible than our own directory. After rigorous library research, I located some published material on this subject which gave me a lead as to possible sources of past directories. It wasn't until I wrote to the Dutch Post Museum and British Telecom who posted examples of past directory pages that samples of past international directories began to build up. I decided to fax the designers involved with the Dutch PTT, American and British directories to find out about their experience and input concerning





their work on the directories and they kindly replied. Unfortunately, up until now there was no written information on any aspect concerning the Telecom Eireann directory. After writing to a contact in the company, I was eventually made aware of the existence of a directory manager who I contacted and an interview followed. This mainly revealed directory marketing information and a referral to Golden Pages who are the technical advisers to the Telecom Eireann directory. A series of interviews with the key advisors followed, who provided essential technical information concerned with the current Telecom Eireann directory design.

The necessity to acquire past volumes of our own telephone directory running the course of this century resulted in a number of visits to the archives of The National Library of Ireland where I researched and studied the developments in the layout and obtained relevant copies of telephone directories which existed from 1917 to the present.

Being neither an aesthetic object nor an art book, the telephone directory is an industrial product of social communication, humdrum, run of the mill typography. The telephone directory has always been neglected by publishers and has never really inspired typographers.

However, not many of us realise the wealth of information which is compiled within our telephone directory. Everything from useful phrases in foreign languages to information on entertainments is



available. The telephone directory also encapsulates the tightest restrictions for designers and is the most neglected piece of informational design. Born from the necessity to list numbers, the directory is also something which raises design, typographical and ecological issues in every country that has a telephone network.

The telephone directory may seem like a boring insignificant design project, especially in this age of Carson and Brody, but with its wealth of design problems it's not just a cumbersome nuisance to which no thought need be given. The telephone book requires the resources of the best graphic designers' problem solving and analytical skills. We all know we can talk to our friends in Australia or other destinations at the push of a few buttons, but if we don't push the right buttons in the right sequence the technology is wasted.

This Thesis will be structured in four chapters. In chapter one, I will discuss typeface design, by tracing the development of the typefaces which are in use and were designed for telephone directories.

Chapters two to four will look at the developments in interior page layout of the Dutch PTT, BT and Telecom Eireann directories.

Through the study and comparison of these layouts the influence and effect of input from professional designers will become apparent.

Aspects of the layouts will be examined in detail to show how legibility of a telephone directory varies from that of continuous text.





This chapter will look at the various typefaces designed and used in telephone directories. Through the examination of these typefaces, the principles, the cultural properties and the process of designing typefaces specifically for telephone directories will become apparent.

Chauncey Griffith's work with the Mergenthaler group in improving newspaper legibility impressed The Bell System so much in 1937 that they asked him to design a typeface specifically for linotype composition of telephone directories. Before 1938 telephone directories were set in whatever typeface took a publishers fancy resulting in legibility chaos. The result of Griffith's work was *Bell Gothic*, which became the standard for directory composition around the world because of its functionality and clarity. The use of *Bell Gothic* remained standard even when methods of printing directories became more advanced but its tolerance for new printing developments was not as successful.

#### PROBLEMS WITH *BELL GOTHIC*

*Bell Gothic* posed problems for AT&T in the early 1970s when it began to compose phone directories on high-speed cathode ray tube (CRT) typesetters. This caused a printing problem as *Bell Gothic* was designed





**FIG. 1** | 5½ | Address | 7½ | Name  
The lowercase h's from Bell Gothic (The Address font) and Bell Gothic Bold (The Name and Number font).

to the specifications of slug setting and letterpress printing. The compensation for ink squash in the design of the characters meant that when reproduced by photo typesetting and offset litho, the characters tended to thin down and when set on CRT machines, stroke weights became too light and pinched out.

Attempts to compensate for this by over exposure or over inking tended to make the characters fill in. (CARTER, '90, p. 32) Such thickening could not be controlled. An example of the effects of the described printing on one letter, h, shows the erosion where the arch springs from the stem. (FIG 1) To remedy this a controlled gain in stroke weight to the new directory face by the designer and not applied during printing would be necessary.

New typesetting technology had the ability to get away from Linotype duplexing, which forced light and bold characters to share widths. However, now the width of the address font could be diminished so that the name and number font could be made more legible. This was one of the main reasons for the development of a new improved *Bell Gothic*. But during the initial discussion, AT&T expressed a desire for 'a more contemporary look, as *Bell Gothic* by this time was forty years old, one typographically compatible with *Helvetica* and other modern Sans Serifs with which it is likely to be associated in some of its applications." Carter tried to bring these aesthetic considerations and technical imperatives together and in many cases they combined excellently to work in his favour. (CARTER, '90, p.32)





So with the demise of *Bell Gothic* inevitable due to its incompatibility with improved printing technology, Carter set out on his four year task of designing *Bell Centennial* in 1974. He drew over two hundred characters for alternative fonts that varied in weight and degree of compression. He began his typeface design by trying to resolve some of the problems with *Bell Gothic* while retaining aspects of the *Helvetica*-like characteristics where they served the essential purpose of design for printability.

#### THE *HELVETICA* CHARACTERISTICS OF *BELL CENTENNIAL*

Unfortunately the sans serif faces in existence were designed before the invention of CRT typesetting and obviously, therefore, took no account in their design of the effects of an amorphic distortion on their letterforms. These effects were less than flattering. After analysis of the behaviour of the forms during distortion, the characters were modified by Carter in such a way that they stood up to compression much better, both in appearance and legibility.(CARTER, '90, p.31) Although AT&T wanted a face typographically compatible with *Helvetica*, it was not designed to be at its functional best at 6 or 7 point, nor was any other modern sans serif - their purpose is more general.

The style and function of *Helvetica* caused problems for Carter. However, only five lowercase letterforms were involved in this problem,



---

acegs  
acegs

**FIG. 2**

TOP: The original Helvetica letters.

BOTTOM: The newly designed Bell Centennial letters.

---

Helvetica  
356  
356

The newly-designed figures.

**FIG. 3**

TOP: The original Helvetica figures.

BOTTOM: The newly-designed Bell Centennial figures.

but all occur frequently in the language and hence are influential in the overall appearance of the printed font.(FIG 2)The version at the top (*Helvetica*) displays letters which are typical of the modern sans serifs such as *Univers* and *Folio* which has a certain amount to do with their clean-cut, elegant lines. However, the bottom line shows how Carter resolved the ends of the strokes cutting them off on the horizontal. The letter form is now made more enclosed; the interior counters are made smaller and are given a narrower outlet to the surrounding white space, causing the positive parts to come closer together.

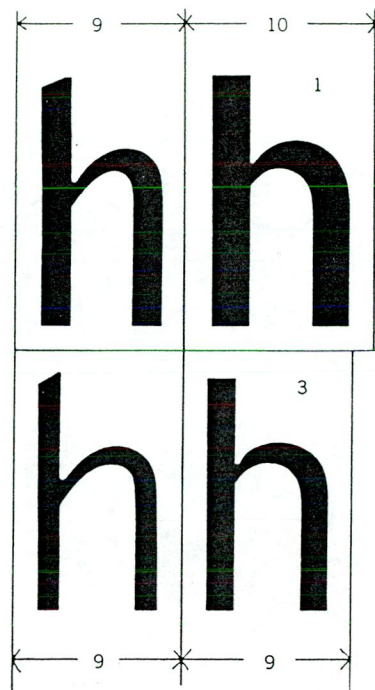
The same design problem occurs with the figures of the *Helvetica* forms. They are both much wider at 6pt and more ambiguous than those of the redesign (FIG 3) *Helvetica's* figure 3 must be more easily confused with 8, its 5 with 6, 6 with 8, etc, particularly when condensed. The redesigned figures (the bottom figures) are of open form, consistent with *Bell Gothic* - functional and clear.

#### THE *BELL GOTHIC* CHARACTERISTIC OF *BELL CENTENNIAL*

Carter's redesign (*Bell Centennial*) has increased in weight from *Bell Gothic* and has increased in lowercase x-height - the most important single factor in typeface legibility. There is also a generic similarity between *Helvetica* and the new design; the more symmetrical arch, characteristic of contemporary sans serifs, and the square topped ascender. In the new designs, the crotch(where the arch joins the stem)







**FIG.4**

RIGHT: The lowercase h's from Bell Gothic (The name font)  
 LEFT: Helvetica (The Name font).  
 Image on the left shows the ascender squared off, more  
 symmetrical arch, less weight where the arch joins the stem.

has been relieved of weight to reduce the risk of trapping ink.(FIG 4)

The point at which the characters come together actually shows a slight gain over *Bell Gothic* bold; while in the heavier drawing (bottom) the results are virtually the same as in *Bell Gothic* Bold.(FIG 5) These clearance dimensions are critical when it comes to the electronic compression of these fonts.

The compression of the address face onto a narrower body was thought to be appropriate to its relatively lesser importance in the directory. The combination of a wider name font and a narrower address font gives an aggregated result very close to *Bell Gothic* allowing the same amount of material to be set on a page as was previously achieved and as required by AT&T specifications. (CARTER, '90, p.32)

## UNIVERS

Under Wim Crouwel the Dutch PTT Directory received *Univers* as its new typeface also in 1978. It was a unique situation to have an off-the-shelf typeface implemented, as Colin Banks and Matthew Carter tested such an approach but found the results unsatisfactory.

However ,Wim Crouwel could not benefit from Matthew Carter's findings, He also carried out tests with different typefaces to choose the right face: a slightly condensed *Univers* was compared with *Times*. The



designing the face which meant there was nothing between the design and the output forms.

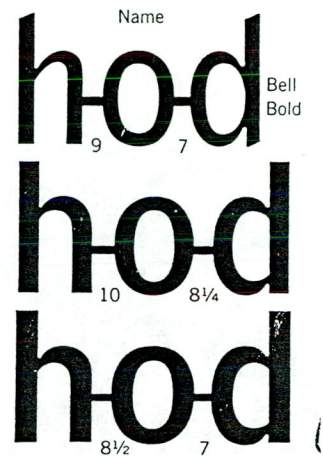
#### FACTORS GOVERNING TYPEFACE DESIGN UNCOVERED PRIOR TO BT DESIGN

The first bridge Colin Banks had to cross before designing the typeface *Phonebook* in 1986 was to revise the traditional aesthetics governing typeface design. The factors which affect and govern the design of a typeface for telephone directories are complex. Space saving obviously is one factor. This is combined with particular legibility considerations. The difference between continuous text legibility and that of telephone directory legibility is that in the latter people search vertically. What type designers normally do is to try to make a typeface look harmonious, to spread the vocabulary throughout the alphabet so that it all knits together in a smooth sort of way. This, is important because, under normal circumstances, you are reading continuous text letters in the context of words, words in the context of sentences. However, in Telephone directories “we want to emphasise the difference between each letter - within reasonable aesthetic constraints - because that’s what sometimes distinguishes one name or number from another.” (VICKERS, ‘87, P.6) Letters must have a chance of leaping out.

Colin Banks had been trained to make letter forms that make a harmonious word and pattern, but realised that nothing should blur the change from one letter to the other. This was reflected in the typeface he designed. “If you put an ‘r’ next to an ‘n’, the ‘r’ might bridge and look like an ‘m’(fig 6). Whereas in a typeface normally “one







**FIG.5**

TOP: The lowercase h's from Bell Gothic (The name font)  
 MIDDLE: Bell Centennial (The Name font).  
 BOTTOM; Bell Centennial (the address font)  
 Point at which letters come together, the middle version showing a gain, the bottom version showing the same width.

most important part if the project was the reduction of paper use. That was the reason for *Univers* ultimately being chosen. Another argument for the choice was that *Times* in the Rotation print process is likely to break because of the thick-thin ratio. The thickness of *Univers* is relatively even.' (EVANS, DE LANGE, '96) A narrower size was chosen with experiments undertaken in bold, roman and italic type. Because of the complexity of setting programmes, capitals were omitted.

Gerard Unger with Chris Vermass also developed a special corresponding number, known as 'series 1984', for *Univers* some years later, as the original numbers tended to fill in and were not as legible as the letterforms. The need for modification to the numeral typeface came from recommendations from the sense physiology (TNO) report which recommended 'a change to typeface with more open structure of the 6 and the 9'. (WOUW, '90, p.28) So, was the use of an off-the-shelf typeface successful? A look at what happened next in the Dutch PTT Directory may help to assess this.

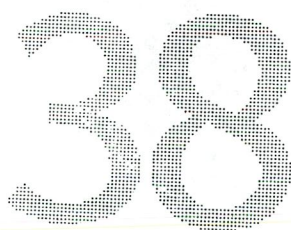
TNO published a report in 1979 on the Dutch directory design with the 'conclusion that the directory especially for the elderly is only just legible' (wouw, '90, p.29). In 1992 Martin Majoor jokingly said to his friend Kees Schelvis, when they realised the Dutch directory needed a rethink, 'I'll make a typeface for it'. He did just that, resulting in *Telefont*, 'a robust and simplified industrial typeface with a variant for continuous text' (KINROSS, '95, p.7). Majoor used technology in





**FIG.6**

Phonebook 'r' and 'n' with a clear difference in the loops, so they will not bridge and look like an 'm'



**FIG.7**

Phonebook 3 and 8 with fairly open terminals on the 3 to avoid confusion with the 8.

looks for commodities of letterform, here we were trying to make a clear differences in form whilst still keeping the weights harmonious. U.S settings read very vertically, where as English lines need some help in connecting one letter to the next because they are longer.’

Therefore, more horizontal stress is put into the forms (VICKERS, ‘87, p.6). “The Americans were very keen to compress letters, partly to get better clearance between them, but we felt we could achieve better printing. The space however had to come from somewhere, so by reducing the inter letter spacing throughout the whole design, was necessary but risky.” (VICKERS, ‘87, p.6)

Research had identified the potential weak spots inherent in the sans serif typeface. When produced very small, the pincer shapes formed by letters like “c” and “e” tended to form ink traps and so variants were tried in which the letters were opened up and their terminals emphasised. Similarly, in order to give a clear distinction between numerals 6,9,8,3,5 which when badly inked tended to cause confusion with one or all appearing as 8, the terminals between them need to be fairly open where there is a break in the loop (FIG. 7).

This was a problem highlighted by Carter in relation to *Helvetica*, particularly when condensed. However, Colin Banks was developing *Phonebook* on a system whereby each pixel could be controlled. Hence, the areas where Carter encountered ink traps and other problems could easily be modified. Carter had implemented his designs for the States at this time. Banks had thought of using his typeface as it stood, but felt “we could make changes to letter forms which allowed us to set closer together.” (EVANS, BANKS, ‘96)





#### CULTURAL CHARACTERISTICS IN DIRECTORY TYPEFACE.

A point which is probably less apparent in relation to typeface choice is that of the culture of a country, which plays a significant role with regard to a typeface's appropriateness. For example, in America addresses are shorter, like '132 Lexington'. They don't have 'Parkside Ballintue Ballynacargy.' Also, the page size is wider. As a result a typeface with a smaller width to allow more information on one line is needed in Ireland. This was the case with *Galfra*, originally designed by Ladislav Mandel in 1984 for use on the SEAT Italian directory, but needed to be modified for use in Portugal. "Every country needs a typeface for them because of cultural differences." (EVANS, MANDEL, '96) Portugal is very different from other advanced western countries, because people who have phones tend to have titles and extremely long names, so that requires a different approach to typeface design. Mandel has designed several telephone directories and modifies his typeface according to country.

This cultural consideration may seem obvious and more relevant to the typographic treatment of the page. However, an understanding of relevant cultural characteristics also necessary in successful directory typeface design. *Galfra* aspired to the characteristics of traditional scripts familiar to its Italian culture. Being rhythmic, clear, round and sensual, one curve prolonging the next, it was a script in the 'suave' tradition of the Renaissance. The choice of *Galfra*, due to its qualities of legibility, by the publishers of the Belgian 'Yellow Pages' met with



some reluctance, obliging the design of a more complementary alphabet: a light medium, which was better suited to the Belgian reader.

When Ladislaw Mandel was then commissioned to design a new directory character for the different countries under ITT (Belgium, Holland, Portugal, Porto Rico and Ireland) in 1986, it had to appeal to a diverse cultural audience. At this stage the cultural differences which are controlled with difficulty as much in the spoken word as in the written language and which were verified rapidly in Portugal, became a challenge. Mandel was confronted with strong resistance from the Portugese and the Belgians to *Galfra*. He ultimately drew on a minimum of two families of alphabets, translating the two great currents of thought and psychology characterising the Latin and Anglo-Saxon countries. These played an important role in the resulting typefaces.

*Nordica* was designed with more rigorous characteristics than *Galfra*. Sober and orderly, it better corresponded with the spirit of the countries with cultural tendencies of an Anglo-Saxon nature. This contrasted with *Latina*, set with formal Latin characteristics for Portugal and other Latin countries, which was gestural, full and sensual, in a word more Baroque. In the middle of these two extremes was *Tramantane*, a more stripped down set of characters which were closer to *Nordica* and which could be described as 'neutral' or 'technical'. The *Tramantane* typeface can be used indifferently for either the name or





addresses with either cultural typeface of *Nordica* or *Latina*. The asset of these compact typefaces is that of greater savings in paper. They are also more legible in smaller size than either *Bell Centennial* or *Galfra*.

(EVANS, MANDEL, '96)

In the area of typeface design for telephone directories a vast amount of development and study has been carried out. These developments may initially be seen to stem from the advancement of printing technology, as was the case with *Bell Centennial* and, in turn, *Phonebook*, but also from a space saving perspective. The ability of *Univers* to satisfy this brief, for the Dutch PTT of 1977 worked in unison with the legibility of a directory when a specifically designed typeface is unavailable. However, the typeface designs of Ladislav Mandel for SEAT Italian and ITT take on deeper considerations, those of cultural characteristics of a country and the traditional script to which that culture responds. In light of this, the introduction of a more Anglo-Saxon face with the qualities of space saving, legibility and suitability to printing process would benefit the Irish directory, as Telecom Eireann have not yet accepted the recommendations from ITT to implement *Nordica* instead of *Univers*.



This chapter will trace the evolution of the design layout in the Dutch PTT directory. Specific original elements of the design will be examined, which will denote the important role to which professional designers have in the area of telephone directory design.

There are a number of definable characteristics encapsulated in the Dutch Telephone Directory. The Dutch have laid down a number of firsts in directory design and typography, not just in the area of typeface choice, but also in the position of numbers and in the use of professional designers. Perhaps their most remarkable contribution was the realisation of a modernist spirit within telephone directory design. Before looking into these points specifically, a look at the various typographic changes to page layout used by the PTT will show how the elements of the page were utilised and experimented with prior to calling in professional designers.

From 1904 on there was a need for one national telephone directory in the Netherlands and since then there have been a lot of changes regarding design and publication. PTT started distributing district directories together with city directories of Amsterdam, The Hague and Rotterdam in 1935. The arrangement of district directories was determined by the structure of the telephone system, not by graphic considerations. The national directory had a different typography than the district directories. (EVANS, DE LANGE, 96)





1571	<b>Adolph's-brandvrije Documenten en Archiefkisten</b> , Hoofdvertegenw. H. B. Goettsch. (9-5 uur).	390	<b>Andel, Fa. Gebrs. v.</b> , in Kruideniersw. Voorstr. 66.
1517	<b>Agullar, Malson Antonio</b> , Wijband, Munsterkerkhof 8.	1780	<b>Andel, Fa. H. W. H. v.</b> , in graven, Weerdsingel W.Z. 8.
1898	<b>Aken, J. C. M. v.</b> , Aannemer, Westerkade 15.	82	<b>Andrau &amp; Co.</b> , Wijnkoopert, Oudegr. W.Z. 126.
685	<b>Akkermans, J. H.</b> , Confiseur, Cuisinier, Oudegr. T.Z. 31.	648	<b>Andreas Gesticht, St.</b> , Springweg 156.
		813	<b>Andrée, H. M.</b> , Bakker, Trans 3.

FIG.8 1910 PTT Directory Detail

Algem. Brandstoffenb. Utrecht, N.V. Mariapl. 51	1212	Antwerpen, P. A. v. fa. P. W. J. v. Antwerpen, Nieuwegr. 21	635
Algem. Bankver. v. d. Middenstand, v. h. Alg. Credietver., Wittevrouten-str. 12	2635	Apeld. Machinefabr. v.h. Loog-Landael, Wilhelminalp. 23	1869
Algem. Intermediair Handelskant. Krugerstr. 42	3402	Apotheek 't Gouden Hert v.h. Verheul & Frackers, Amst.straatw. 44	1158
Algem. Mij. tot Wederverkoop v. petroleum en bijprod., N.V. Depôt		Apotheek Vredenburg v.h. Verheul & Frackers, Vredenburg 19	692

FIG.9 1922 PTT Directory Detail

Accountantskant. A. Lammers Amsterdamschestr. weg 144 F bis	13365	Agentuur- en Commissieh., Spoorstr. 8	14213
Accountantskant. E. J. v. d. Maaten Fred. Hendrikstr. 27 (na 5 1/2 u.)	12978	Agterberg, B. Begravenisondorn. Anthoniedijk 2	12526
Accountantskant., Ned. Onderleid. v. A. A. H. Bals, Zullenstr. 15	10402	Agterberg, C. Beeldhouwer en Sierkunstenaar, Nobelstr. 12	13220
Accountantskant. S. Schouten Breedstr. 23	14426	Agterberg, G. Dienstverrichting, Geertkerkhof 16	11080
		Agterberg, H. Algem. Utr. Be-	

FIG.10 1927 PTT Directory Detail

Beek, Th. H. v. Vert. N.V. Blijwielind. Meppel, Joh. Vermeerstr. 9	14299	Berg, J. tot Woonb., W. Barentstr. 53	14708
Beek-Slag, Wed. W. v. Amst.str.w. 54a, Eindhovt	12406	Berg, C. G. v. d. Beh. en stoff., Obrechtstr. 39	11773
Beek, H. v. d. Bedrobel N.V. Douwe Egberts Machinefabr., Poortstr. 30	10832	Berg, F. v. d. Wittevrang. 83	13471
Beekes, A. M. Beh. stoff., Burg. Reigerstr. 31	12573	Berg, F. A. v. d. Vert. v. Rays' Handelsver., F. O. Donderstr. 64	14707
Beekes, J. A. M. Beh. stoff., Oudegr. 316	11775	Berg, H. J. v. d. Vlb. en spekl., Westerk. 34	10850
Beelen, J. J. Expod., transp., Oosterk. 15	12875	Berg, H. J. v. d. Doukerv. Gaard 3	10404
Beersverfabr. Ps. Wed. P. Smits & Zn., Hoogelanden O. Z. 3	11824	Berg, J. v. d. Schoorstr. v., loodg. en metsel., Vinkenburgstr. 13	11686
		Berg, J. J. v. d. Firm. Osti & Co., Fr. Hendrikstr. 13	15116

FIG.11 1930 PTT Directory Detail

It is useful to note early changes in the Dutch directories by examining a few examples from the first half of the century. A directory from 1910 (fig 8) shows a wide running spacious serif typeface with number before the line, separated from the column of text. The second line is indented half a square, and the numbers are not in bold. The columns are separated by a line. In the 1922 directory (FIG 9), the number is now placed at the end of the line connected to the text with dots. The second line is indented one character space and the number is now set in bold. With the 1927 directory (FIG 10) the number is separated from the column of text on the right hand-side. Contrasting sans serif numbers in bold are used, eliminating the need to fill out lines with dots because the number stands out clearly.

After 1930 (FIG 11) there was a change to a bold and roman typeface, and were still in favour of serif faces. The typeface is less spacious and is in a smaller size so more information can go on one line. At this time only names are in bold and a decision has been made to use less spacious numbers. However, the directory of 1941 (FIG 12) shows that the number is again positioned before the line and, unlike previous examples, the second line is no longer indented. The numbers are set in a larger font size than the text.

When the Listomatic system of printing was used from 1958-76 (FIG 13) in the production of directories in the Netherlands, the use of a sans serif typeface was adopted for reasons of clarity. Names are in uppercase,





20223	Weligand, E. M. Schotersing. 93.	Heemst.	
35704	Welland, B. A. Insp. E.R.K. Vitalis-Fiducia, Spaarneel. 15.	21918	Werktuigenfabr., B. J. Pasmann Leidsew. 14.
10901	Welli, A. Kleverparkw. 18 rd.	17239	Wermeskerken, W. J. v. Zijl. 168.
10604	Welli & Zn., N.V. Bontw. en d.kleerm. Bartel-jorisstr. 26.	25693	Wernars, J. K. Vert. Ver. v. d. Burg's Japanlak-fabr., Duinoordstr. 71, Naarlem-N.
15836	Wellscher, F. Lood- en sinkw., Dr. Schaepman-str. 73.	16725	Werner, A. Zaanenstr. 567i.
39231	Weissenborn, E. E. Fr. Schubertl. 63, Heemst.	21863	Werner, D. J. v. d. Vinnestr. 1840.
21558	Welsz, Mel. S. C. Chiropradiste, Schouwjtjeal. 37.	19261	Werner, N. Th. Productieider, Trompstr. 111.
17364	Wells, L. Kloppersing. 25.	18231	Wernik, A. Loodg. en smid, Gen. Joubertstr. 42.
18099	Wekken, J. J. P. v. d. Groenteh., Bakkerstr. 38 rd.	16119	Wernik, C. Lijstenm., kunsth., Anegang 35 A.
20070	Wel M. D. v. A. Ref. Prov. Griffie. Eksterstr. 121.	22361	Wernik, F. Mass.-heilgymn., Uranusstr. 5.
		25464	Wernik, Ferd. Masseur, Zaanenl. 68.
		22361	Idem (b.g.g.).

FIG.12 1941 PTT Directory Detail

DROST H A Sportm Record Vlietl 46c	1 65 82	EGGINK Mel J G H Tandarts GrWichmanl	1 63 54
DROST-LINK Mevr M Pr Bernhardl 13	1 64 31	EGMOND G A Ceintuurbaan 48 l	1 72 21
DRUKKERIJ		EGMOND Mr G v Ag Ned Handel Mij	1 44 47
ATLANTIS Poststr 13	1 78 79	J Obrechtl 30	1 14 00
BLOMMENSTEIJN Brinkl 83 A	1 78 18	EIBERGEN-SANTHAGENS D C v, Me-	1 56 49
bqg	1 48 07	zenl 19	1 42 04
ELSERMAN & VLEK Nijverheidswef	1 61 44	EIGENDOMSRECHT Ass afd St Jansl	1 94 92
15	1 93 32	73	1 75 27
bqg	1 89 74	EIGENHUIS J Makel en bouwk Lindenl 8	1 99 78
HERBI Gudalal 2	1 42 39	EK J A v Litt drs Kamperfoellestr.15	1 75 27
Fa R LOS Nassaul 33	1 41 41	EKKELENKAMP J Antiek en Curiosa Eal 3	1 44 27
MARCKELBACH Kapeistr 21	1 54 81	EKKELENKAMP W Antiek en Curiosa	1 76 17
Fa K ROSENBOOM Kerkstr 32	1 84 08	Landstr 41a	1 84 52
TOM-PAPIER Nw Hilv w 4	1 26 01	na 18 u	1 29 97
bqg	1 56 47	EKLY VERGADERZALE Nenz Landstr 48	1 54 67
v d VEEN & v WERYEN Brinkl 56	1 87 67	ELDEGEE Veetstr 33	1 91 57*
bqg	1 46 34	ELDEN H M v Noorderw 32	
v WETTER & Co Velow 4	1 94 37	ELDERENBOSCH H R H Kam Onnesw 7	
na 6 u A Mutsaerts	1 78 51	ELECTR SIBBING Install bur koelk was-	
DRUNEN H v W Kalffl 4	1 93 45	mach stofz Poststr 4	
DRY CLEANING ACS Laardenw 39	1 12 62	ELEKTR BEDR TECHN BUR BARNE-	
DRIJVER M Mezenl 19		VELD D. Blaauwstr 1	

FIG.13 1958-76 PTT Directory Detail

punctuation marks omitted, the line filled out with dots, with a freestanding number in a separate column at the end of this line. The restrictions imposed by the Listomatic system of printing limited the possibility of input from professional designers.

An interesting typographic development which occurred in relation to the first automated telephone books of 1978, one which most typographic designers have overlooked, is the 'expression of a modernist typographic dream of single-alphabet typography' (KINROSS, '95, P.6). This was realised by Wim Crouwel, the first professional designer to be called upon for directory typographic design in his directory design of 1977. But this gave way to 'the modern traditional values, of skill, subtly and an embrace of the full resources of typography by Martin Majoor in a redesign of 1994. It also means that the old dichotomy of modern versus traditional is swept away: any means are used as appropriate' (KINROSS, '95, P.6). Although, Crouwel's design may have the qualities and ingredients of modernist typography, he managed to achieve, for the first time, a directory layout which read vertically.

Wim Crouwel's design 'radically rethought the typographic conventions' breaking from the requirements of continuous text typography and editing (EVANS, DE LANGE, '96). In using telephone directories the reader needs to read vertically, which is hard to achieve when following the example and structure of traditional continuous text typography and editing. One astonishing aspect of Crouwel's design was the use of non





capital letters. To achieve this given 'a choice of either capitals or punctuation to distinguish surnames from initials .... he preferred the latter' (KINROSS, '95, p.6). Capital letters are an editorial, proper English convention. 'You must use capitals for the names of people or places' was drummed into us at school. But we are not dealing with normal conventional writing here. In my opinion, after studying the existing directories, the use of a capital at the beginning of the line causes an eye trap, and gives uneven shape to that line. However, by keeping all the letters in the name in lowercase, the name itself can be scanned and not the initial letter. With the address also in lowercase, it flows from the name successfully. If the name and address are both in lowercase one may wonder how you would differentiate between them? This is where the typographer comes into play, putting names in bold and addresses light, as the name is of greater importance. The address follows directly on from the name because the name and number, in most cases, can be placed on the first line.

Turnover lines (where the information doesn't fit on a single line and runs over to a second) are a major enemy to space conservation in directories and usually designers are provided with the task of abolishing them. The Dutch directory had a lot of turnover lines up until this time. The main objective is to get as much information on one line so as to get as much information on the page as possible. This objective, while relevant to newspaper design and logical in relation to space saving, results in the horizontal reading of information within the



1 77 04	meijling-hijkema, dr o.s.	1 86 14	mittehof, hervormd	1 42 67	mollee
	arnhemse bovenwg 12/68		bejaardencentrum, molenwg 50		sig ma
1 74 03	meijnaar, e, couwenhoven 85 15	5 12 95	missler, th f, prof eelbersehn 47	1 08 71	möller
1 34 39	meijnk, mej w ch	1 87 81	missler, n, tesselscheldeln 20		church
	wilhelminaln 47	1 79 60	mittemeier, f, j, zusteren 11		en snij
1 48 44	meys-van egmond, a	1 68 25	mitterreiner, ing f j	1 34 35	mois-h
	couwenhoven 27 13		tesselscheldeln 2		griffen
5 20 27	meijling, h j, panwg 81	2 73 73	mobleij, r f, bergwg 101/b	1 61 98	molste
2 78 80	tot nader te bepalen datum	2 34 22	modderaat, j w	1 83 99	molijn
2 31 57	mezenberg, g j, korhoenln 64		oude arnhemsewg 323		ln v vol
1 84 63	mheen, j, vd, kersbergenpln 1,	1 31 67	modderaat, dr k	2 23 34	monad
	pedag adj dir bartiméus		prof lorentzln 52, adj dir		stoffen
1 37 55	mica, a p j, burg potynln 4,		rijksgeeneesk d	5 01 81	monde
	vert nzc	1 23 34	mode-en handwerkhuis, takken,	1 19 57	mondf
1 82 64	mica, h l, c schellingerln 4		slotln 100/1		gr adol
1 73 50	michelsen, p j j		modehuis	2 40 02	monge
	pr margrietln 489				ln v vo
2 76 17	michon, joh, gr adolfin 31	1 28 83	bonnaterie, slotln 235	2 52 44	monro
5 16 51	middag, a, couwenhoven 1515	1 55 53	jbb, p c hooftln 5	1 52 20	tollens
2 36 06	tot nader te bepalen datum	1 26 71	idem, j vd vondelln 14		monsh
2 56 77	middag, h, ridderschapln 40	2 57 34	mb, slotln 130	2 52 92	monsh
1 70 64	middel, r, i catsln 28				

FIG.14 1977 PTT Directory Designed by Wim Crouwel

woonhuisaansluitingen		rutgers, b w, hogewg 50/a	15 53	schouten, h
niemantsverdriet leenheer j, voorz		ruijter, j w, de, haeskenshof 25	23 77	schouten, p
p cie	26 24	ruijter, a j, de, kerkstr 5	18 64	schouwse
breen i, schipper	(01188) 19 15	rij, p h, van, schuitkant 4	17 48	torenwg 10, g
overbeke m k, stuurman	13 02	rijke, a, de, fepel 10	36 47	schouwse
bgg	31 14	rijkswaterstaat dienstkring		bouwmateri
reeling, e, haeskenshof 32	27 48	deltakust	99 11	kabbelaarswg
reerink, dr e h		het ir j w tops-huis		schrammelj
kamperfoeliewg 13	20 16	voor doorkiezen zie voorwoord	9	j j boeyeswg
rees, j, van, oppelmeest 30	25 18	ms hammen		schras, h j, l
rees, j, van, oosterscheldeln 37	25 29	autotelefoon	06-52 13 46 87	schreuders
regensburg, a c		rijkswaterstaat dir zeel dk		westerswg 2
oosterscheldeln 14	17 23	deltak coörd h, haven burghsluis	30 68	schrier, n j
regt, mr m c, de, abelenpad 2	38 22	rijn, j, van, j j boeyeswg 7	31 46	schrier, n, ze
reisen, y m j, van		rijnberg, c, haeskenshof 12	33 67	schroth, g e
grevelingenln 2	28 57	rijnberg, c j, hogezoom 67/a	42 02	schubert, f
reitsma, r j, j j boeyeswg 29	20 98	rijnberg, k a, kerkstr 12	20 66	schulten, p
remkes, g, acacieln 13		rijnberg, j c, margrietstr 5	31 90	schults, m p
autorijsschool	32 93	rijnberg, c a, repel 1	33 89	schutte, p, b
remmers, j, bernhardstr 63	17 24	rijpers, m e a, dapperwg 2	41 60	schuurman,
remmers, p, margrietstr 26	25 79	rijpkema, d, burghsewg 37	18 06	schwarz, g, l
remijn, p, braberswg 6	15 87	saarloos, w, oosterscheldeln 15	26 21	sebek, j r l f
rensa, r r s m, hogewg 82	27 34	sab adviesburo, mr ing j kiers,		semeijn, f c
rentmeester hanse, ing a j		hg hillewg 4	18 81	semeijn, c, b
rinne 19	24 24	saarloos, w, hogewg 11/a	18 27	schrieke, m h

FIG.15 1982 PTT Directory Designed by Jolijn Van De Wouw

page layout. Street names in Crouwel's design are placed alphabetically and, in most cases, the address is placed under the name on a turnover line. However, this has the benefit of acting as a list, a complete number, name and address list, by allowing the most vital components to be together. This leads to the possibility of complete vertical scanning of the information.(FIG 14) These features, in my opinion, display a designer's analysis of the information and understanding of how the information should perform, rather than turning to conventional adaptations of continuous text layouts.

Crouwel certainly succeeded in saving space. A four column layout was possible because of the shortness of lines. Also, the name of the street increased in importance, therefore abbreviations had to be made. For example, 'weg' (road) is abbreviated to 'wg' and 'dijk' (dike) abbreviated to 'dk' (WOUW, '90, P.27). However, "there were complaints about the small size of type" (KINROSS, '95, P.6). Some years later, in 1982, some aspects were softened in a redesign by Jolijn Van De Wouw. (FIG 15) Type-size was increased and three, rather than four, columns per page were used. However, there was still a retention of non capitals.

On the other hand, Majoor's subsequent 1994 design was a regression to the traditional layout.(FIG 16) Capitals are again introduced, but as small caps. However, for the first time punctuation marks are omitted. Names are heavily condensed. Majoor held onto certain aspects of Wouw's design: numbers after names. The capitals here act to hold the





<b>Oostrom H S M van</b> Kustersgang 32 3991 EG	7 88 72
<b>Oostrom A J van</b> Linzen Oord 72 3991 XR	7 22 12
<b>Oostrom H N van</b> Linzen Oord 74 3991 XR	7 27 65
<b>Oostrom A M H van</b> Pr Bernhardwg 9 3991 DE	8 03 08
<b>Oostrom E C M van</b> Rademakersglde 145 3994 BS	7 16 27
<b>Oostrom J C M van</b> Vlierwg 19 3991 BA	7 15 10
<b>Oostrom J M van</b> Weth v Rooyenwg 9 3991 DP	7 29 12
<b>Oostrom A van</b> Loeriksewg 52 3991 AE	7 13 33
<b>Oostrom B van</b> Koppeldk 9 3992 LR	7 12 46
<b>Oostrom en L J M Linger R van</b> Snoekslot 120 3993 HN	5 04 97
<b>Oostrom's Loonbedrijf</b> Houtensewetering 33 3991 LK	7 26 45
<b>Oostrum J H A van</b> Bovencamp 14 3992 RZ	7 72 51
<b>Oostrum H W van</b> Burg Haefkensstr 7 3991 DA	7 83 23
<b>Oostrum A H van</b> Daalderslag 14 3991 RG	7 36 35
<b>Oostrum P M van</b> Ganzenweide 12 3993 CI	7 46 37

**FIG. 16** 1994 PTT Directory Designed by Martin Majoor

eye by their harsh square shape. However, by not having street names alphabetically ordered, the initials of names heighten in importance. The use of white space instead of punctuation is both good and bad. The white space between name and address causes rivers which draw the eye to the spaces. However, the punctuation of Wouw's page causes not only rivers, but a page with an appearance of a scattering of ticks or commas. The use of the punctuation in the design of Crouwel, which is of a smaller type size, avoids these problems giving the page a very harmonious appearance.

#### NUMBERS BEFORE NAMES.

After examining the page design in the Dutch directory, it is interesting to note the use of telephone numbers within the design. "In telephone books the numbers come before names, so that there is a natural space between columns." (WOUW, '90, p.28) Although this was also the position of numbers in 1884, 1910 and 1940-1950, when numbers were placed before names in Wim Crouwel's design people complained that "they did not want to be known as numbers" (EVANS, DE LANGE, '96) (KINROSS, '95, p.6). The issue of numbers before names was favoured by Majoor and Schelvis in their initial presentation to PTT Telecom and Telemedia. However, it was turned down in favour of the traditional number after name. Funnily enough, when Wim Crouwel conducted experiments with *Univers* for use in the 1977 directory, he also experimented with the position of numbers, whether the number works more effectively on the left or right.



Berg J.v.d, Zomerhofstr. 60	28 23 38
Betonconstr.	
idem.	28 23 24
Woonh. Torenln 3	15 78 01
Woonh. J.A.Sluimer, Platostr. 254	19 32 95
Berg Jr.J.v.d, Groene Wetering 44	13 96 02
Berg Jr.J.v.d, Schippersstr. 49	23 06 58
Berg Mej.J.v.d, C.v.Nieveltstr. 12b	11 50 54
Berg Mej.J.v.d, C.de Wetstr. 22b	27 27 60
Berg Sr.J.v.d, BeyerlandseIn 149	17 00 16

**FIG.17**

Trail design by Wim Crouwel 1977

28 23 38	Berg J.v.d, Zomerhofstr. 60
	Betonconstr.
28 23 24	idem.
15 78 01	Woonh. Torenln 3
19 32 95	Woonh. J.A.Sluimer, Platostr. 254
13 96 02	Berg Jr.J.v.d, Groene Wetering 44
23 06 58	Berg Jr.J.v.d, Schippersstr. 49
11 50 54	Berg Mej.J.v.d, C.v.Nieveltstr. 12b
27 27 60	Berg Mej.J.v.d, C.de Wetstr. 22b
17 00 16	Berg Sr.J.v.d, BeyerlandseIn 149

**FIG.18**

Trail design by Wim Crouwel 1977

To investigate this lets take a look at the decision Crouwel had to make when determining the position of numbers. When numbers are placed to the right, at the end of names and addresses, the eye must travel from the name/address information to the number and the white space will hold the eye (FIG 17). This interferes with the retrieval of the number, or even the connection of the number to name. The numbers on the left, are pleasing to the eye and there is a flow between the number and address. A balanced list. The eye can read vertically, which explains Crouwel's decision to implement this layout. (FIG 18)

Majoor's redesign of 1994 (FIG 19) has numbers on the right, lines filled out with dots, but ending 1cm from the numbers, leaving a column of white space. If studied it reveals a tendency to search vertically first, and then, horizontally across the line to retrieve the number. For this reason, I think, the vertical legibility requirement of telephone directories was achieved to a greater extent by Crouwel's telephone directory design.

However, the typographical treatment also plays an important role in relation to this. The numbers in the design of 1958 (FIG 20) have the same treatment as that of Majoor's design. But the typographical treatment of the 1958 design appears scattered and confusing. Amongst the uppercase surnames, uneven turnover lines and dots with a large amount of space between them, the eye is immediately attracted to the





Oostrom H S M van	Kostersgang 32	3991 EG	7 88 72
Oostrom A J van	Linzen Oord 72	3991 XR	7 22 12
Oostrom H H van	Linzen Oord 74	3991 XR	7 27 65
Oostrom A M H van	Pr Bernhardwg 9	3991 DE	8 03 08
Oostrom E C M van			
Rademakersgilde 145	3994 BS		7 16 27
Oostrom J C M van	Vlierwg 19	3991 BA	7 15 10
Oostrom J M van	Weth v Rooyenwg 9	3991 DP	7 29 12
Oostrom A van	Loeriksewg 52	3991 AE	7 13 33

FIG. 19

1994 Directory Detail by Martin Majoor

60	1 03 07	EEFTINGH K G Florist 60	1 14 21
Mevr M E SLAAP-KLOKKE Brinkl 100	1 31 07	EEK H v Jac Catsl 1	1 64 68
STOFBERG Laardew 250 I	1 93 12	EEK-GRAVESTEIN Mevr J A v Tessel-	
v STRAATEN De Genestetl 37	1 49 55	schadel 5	1 40 16
v TULDER Ilavenstr 27	1 39 05	EEKEN Th A Huizerw 134	1 52 52
T v ZALINGE Floriall 55	1 89 72	EENENNAAM Gzn C J v, C v Rennesl 1	1 14 98
DRUGISTERIJ en PARFUMERIEEN J J		EENENNAAM G v Waltherl 30	1 67 55
QUARTEL Herenstr 20	1 36 76	EERDEN P C v d Ceintuurbaan 104 II	1 95 32
DRGT J H Assur Jac Ruysdaell 13	1 56 44	EERDMANS-de ROTH E M Zwartew 25	1 41 32
DRONKERT L A Mw Hilvers w 15	1 74 03	EERHARDT F F Goudsmid-horl m Haven-	
DRUGLEEVER FORTUYN Dr H J W		str 35 A	1 31 31
Gr Hertoginmel 10	1 39 01	EERSTE R'DAMSE MIJ v VERZ NV Insp	
DRST A J P, R Visserl 8	1 85 86		

FIG. 20

1958 Directory Detail

38595	Welden, J. A. A. M. v. d. Herenw. 100, Heemst.	24325	Werff & Zn., E. J. v. d. Manuf.h., meubel- en
38145	Welden, L. v. d. Wasserij, Raadhuisstr. 11, Heemst.		meubelstoff.bedr., Gijsbr. v. Aemstelstr. 116.
13158	Welden, L. M. J. v. d. Grassiers, Hasselaarspl. 23.	21252	Werff-Moljnen, Mevr. Wed. Dr. A. v. d. Tempeliers-
25658	Welden, P. v. d. Handelsreis. en vert., Stuyvesant-		str. 11.
	str. 85 rd, Haarlem-N.	13314	Werkhoven, A. P. Slagergereedsch., Godfr. v.
10218	Welden & Zn., Fa. A. A. v. d. Grooth. in levensm.,		Boulikonstr. 1.
	Depôt N.V. Wessanen's Kon. Fabr., D. Spaarne 46,	21963	Werkhoven, L. G. Wouwermanstr. 40.
12314	Idem (b.g.g.).	16659	Werkhoven, H. J. J. v. Julianal. 81, Overv.
38754	Welden & Zn., L. v. d. Schilders, Kerkl. 105,		19882 Idem.
	Heemst.	22054	Werkhoven, J. Ch. D. v. Zomerzorgert. 6, Bloemend.
14971	Welden-Lamp, Mevr. A. A. v. d. Parkl. 13.	24633	Werkhoven, W. D. Th. v. Kleverl. 17, Bloemend.
10183	Welden-Mathé, P. J. v. d. Sterkunst., leraar tekenen,	13340	Werkinrichting, Haarl. Botermarkt.
	M.O., Hyacinthenl. 39.	10659	Werkinn. Nazorg 2e Paviljoen Nazorg, Schalkwijk-
38077	Welden-Vasen, Mevr. M. P. A. M. v. d. Bloekersv.w.		kerw. 1.
	11, Heemst.	35252	Werkman, E. Kass. en Comm. in eff., Fr. Lisztl. 1,

FIG. 21

1941 Directory Detail

orderly telephone numbers resulting in the inability to search vertically or horizontally.

The success in Majoor's design lays with the balance of weight in relation to information and also its feeling of order and approachability. Uppercase characters do not overpower lowercase. The eye can skip the address and the broken line acts to give a pleasing even shape to the column while also guiding the eye to the number by not trapping white space. However, the customer must still search vertically then horizontally. With Crouwel's typographic design this double process for searching is not necessary. One just needs to look vertically down the names, and the number is beside it. Also there is a large amount of space wasted when filling out the line with dots. For this reason, and reasons listed above, I feel Crouwel's treatment of numbers is most successful, particularly as it allows both vital components of name and number to appear together.

The most successful factor relating to Majoor's design is that of the typographic treatment. This is also the case in Crouwel's design. A poor example of typography would be the directory design of 1941, where the typography reads extremely horizontally and consumes a large amount of space with turnover lines. In this case the number would work better at the end of the line in flow with the eyes' horizontal search. (FIG 21)

The experimental designs of the Dutch directory in the period



from 1978 to 1994 have benefited greatly from the use of professional designers. It was their ability to analyse the information and its use and also to consider previous layouts that led to the vast improvements in legibility and page layout. I do think, however, that Wim Crouwel has come closest to the requirements of specific Telephone Directory legibility requirements.





This chapter will examine the design evolution of the British Telecom directory. The effect of involving a professional designer in the layout and a discussion on the elimination of repeat surnames and their treatment in the overall design.

The British Telecom directory followed a course in its development which has tailed the Americans up until the involvement of Colin Banks in its design. Even then, his typeface *Phonebook* was inspired by Matthew Carter's *Bell Centennial*. The British directory had to tackle cultural differences which have hampered the straight transference of the American approach to layout. The differences which BT had to deal with are also a problem for the Telecom Eireann directory, which will be dealt with in the next chapter.

**33 (Section 1)**

**IN CASE OF FIRE, CALL "FIRE BRIGADE"; NO NUMBER REQUIRED.  
SPEAK DIRECT TO FIRE STATION; GIVE ADDRESS OF FIRE.**

Battersea...	13 A.	Biscuit Co. . . . .	Queen's rd	Aven
Gerrard ...	2697	do. Co-operative Shipping and	3 New Oxford st	Bank
		Tourist Society Ltd.	N.O.	Butte
Barnet ....	82	do. Dairy . . . . .	38 High st Barnet	Holb
Barnet ....	155	do. Dairy (F. de Rivaz, Prop.)	High rd Whetstone	Dalst
Holborn....	987	do. Engraving Co., Ltd. . . . .	5 Tudor st E.O.	Hop
City .....	8737	do. Engraving Co. Ltd. . . . .	5 Tudor st	Batt
Central ....	9991	do. Translation Agencies . . . .	40 High Holborn	Gerr
Bank .....	8071	"A" Mr. Tailor . . . . .	88 Chancery E.O.	West
London Wall	7180	AARON & Munich Fire Insurance Co.	1 Royal Exchange	Barn
East .....	3277	AARON I. Ladies' Tailor . . . .	64 Redmans rd	Wren
Central .....	421	do. Norman H. Solicitor . . . .	64 Moorgate st	Bank
Paddington..	561	AARONS Dr. S. Jervois . . . .	6 Harley st W	Cent
Dalston ....	1683	do. Fanny . . . . .	132 Amburst rd N.E.	Chig
Purley ....	210	do. Frank H., Stockbroker . . . .	The Fire Kenley	Mayl
London Wall	2662	do. L. & Son . . . . .	20 Gresham ho	Nort
Purley ....	84	do. Lewis . . . . .	The Hayes, Kenley	Brit
East .....	404	do. P. Wholesale Rag Merchant..	16a Cudworth st E	Woo
Hop .....	1613	do. S. & Sons, Boot Manufactures	60 Lambeth wks S.E.	Chig
Streatham..	1236	do. Victor L. . . . .	82 Norfolk Ho rd S.W	Padd
London Wall	7277	do. A. Co. . . . .	10 Dalston st	Hani

FIG.22

1912 BT Directory Detail

The British Directory started life in January 1898 with 82 pages which listed all the Post Office subscribers in the country. It had handsome margins and 12 point type. In the directory of 1912 (FIG 22), known as 'London and Provincial' directory, all subscribers were still listed in one book. These were mostly businesses and the lengthy name listings had a considerable effect on the layout of entries. Addresses, less significant, are given a very narrow right-hand column which caused many lines to turnover. "Phone numbers are in small, thick, black type, very often smudged and extremely difficult to decipher. Whole pages too, are often





<b>metal and general merc</b>			
<b>STREET, BETHNAL</b>			
40	<b>A-S. REFRIGERATING MACHINES Ltd,</b>		Abi
E-	254 Grays Inn rd W.C.1.....	MUSEum... 0180	Abi
	(Regd. Office), Trafalgar Watrl oopl SW1 REGent..	1952	Abi
	A.S. Transport Service, Motor Haulage		Abi
25	Contractors, 333 Markhouse rd E.17..	WALtmsto 1410	2
	A to Z Manufacturing Co, Wdwrks & Toys		Abi
	Criterion works Fairbrdge rd N.10....	MOUntyw. 4888	F
73	<b>A.T. SPEEDOMETER Co. Ltd,</b>		Abi
13	20 Avonmore rd W.14.....	WESTern. 1422	E
	A.V. Motors, 5 Park rd Teddington.....	KINGston 0710	Abi
91	Aagaard O. E, Press Attché Dnsh Legatn,		4
	Southampton lodge Fitzroy park N.6..	MOUntvw. 4208	Abi
55	Aal S. Foreign Broker, 20 Copthll av E.C.2.	LOND Wal 5478	E
64	Do.....	LOND Wal 3218	Abi
82	Aal Stephen, 101 Howards lane S.W.15....	PUTney. 1813	C
82	Aaron D. H.1 Dartmouth rd N.W.2.....	WILlson 1924	Abi
74	Aaron Miss K.78 Yale ct N.W.6.....	HAMPstd. 4919	N
41	Aaron N. H.22 Lyndale av N.W.2.....	HAMPstd. 0421	Abb
	Aaron Norman H, Solicitor, 64 Moorgte EC2	CENTral. 6377	Abb
01	Do.....	LOND Wal 6377	Abb
	Aaronberg I. Costume. Mantle Mir,		

**FIG.23**

1926 BT Directory Detail

A.A.C.Cars, Old Shoreham gar.....	Shoreham-by-Sea	3953
A.A.C.Cars, The County Marine pde.....	Worthing	30212
A.B.C. Portable Buildings, 1 Church la.....	Southwick	2421
A.B. Electric Co, 48 New Broadway.....	Worthing	2591
A. & B. Home Services Ltd,		
12 Grand Hotel bldgs...	Eastbourne	138
A. & C. Shoe Shop, 13 Lewes rd, 7.....	Brighton	61040
<b>A. &amp; H. MOTORS (BRIGHTON) Ltd,</b>		
Head Off, 119 Lewes rd, 7.....	Brighton	27197
Do.....	Brighton	61044
Do.....	Brighton	27763
A.I. Die-Casting Tool Co. Ltd, Toolmkrs,		
Gloucester la...	Littlehampton	481
A.I. Engineering Co, Toolmkrs, Arundel rd...	Littlehampton	481
A.P.V. Co. Ltd, Engrs, Manor Royal.....	Crawley	1360
A.P.V. Athletic & Social Club,		
Jordans London rd...	Crawley	918
Gatwick rd.....	Crawley	25194
A.P.V. PARAMOUNT Ltd, Manor Royal.....	Crawley	1360

**FIG.24**

1954 BT Directory Detail

so faintly printed that they can scarcely be read" (EL-BAZ, '87, p.7). However, customers had to get used to these dense columns. In 1926 (FIG. 23) there was a switch from two to three columns per page and also a progression of layout much in line with what we're now commonly accustomed to, but at a more primitive stage. This arrangement has a strong alignment with that of the Dutch PTT directory which utilised this format from 1922. The address or business description now follow directly on from the surnames, which are alphabetically listed, and all are the same typeface, size and weight. This requires horizontal reading of the line. The exchange name and phone number conclude the line of information. The sans serif typeface combined with emboldening of the first three letters of the exchange names "signified the introduction of machine switching which allowed users to dial direct instead of having to call via the operator" (BOAG, '86, p.19). Although this layout overall may attract the eye to the right of the columns, it certainly has a more unified, balanced appearance and also has improved consultability.

In 1954 (FIG. 24) the directories were slug set rather than single letter set and were set in 6 point *Bell Gothic bold* with *Gothic* no. 6 for exchange names and bold entries - which was drawn from the Americans. Business listings are still more dominant, with capped initials in preference to full names and although not in bold, they stand out by their harsh square appearance as compared with the rounder lowercase characters of the address. With exchange names and numbers aligned on the right there is a greater refined balance and undoubtedly a more sophisticated air to the page than that of 1926.





## 246 Burnham-King G

**BURNHAM-KING G,**  
 3 Elm Ter, Constantine Rd NW3 2LL...284 1402  
**BURNHAMS M.A.,** 126 Woolstone Rd SE23...699 7968  
**BURNI F,** 11/125 Park Rd NW8 7JS...724 1720  
**BURNICLE J,** 38 Endymion Rd N4 1EQ...348 8402  
**BURNIE D,** 107 Elibank Rd SE9 1QJ...850 1170  
**D.M.,** 38 Earls Ct Sq SW5 9DQ...373 0341  
**J.B.A.,**  
 3/223 Putney Bridge Rd SW15 2PX...874 0140  
**M.E.,** 11 Monmouth Ho,  
 West Hill Rd SW18 5HS...874 3156  
**R,** 26 Wulfstan St W12 0AH...740 8858  
**V,** 13 Klin Ct, Newell St E14 7JP...515 3326  
**BURNIGE H.W.,**  
 40 Wharcliffe Gdns SE25 6DQ...653 7082  
**BURNIKELL C,**  
 50 Cowdenbeath Pth N1 0LG...278 1076  
**G.M.,** 319 Shrewsbury Rd E7 8QU...472 2076  
**L.J.,** 50 Fair Oak Dr SE9 2QH...850 0676  
**M,** 2 Clayton Ho, Homer St W1H 1HE...723 0759  
**R.M.,** 29 Church Av E4 9QY...527 6024  
**BURNINGHAM A.E.,**  
 45 Silkfield Rd NW9 6QU...205 5349  
**D,** 15 Fley Ho, Usk Rd SW11 2RS...870 5312  
**D.A.** 174 Now Dr Av N12 1C7...807 8877

## Where

**BURNS—contd.**  
**C.A.,** 31 Scott Ct, Silvert  
**C.D.,** 17a Durlay Rd N1  
**C.D.,** 10 Goosely La E6  
**C.D.P.,** 43b Hormead F  
**C.E.,** 18 Deseffans Rd S  
**C.E.,** 33 Paultons Sq SV  
**C.G.,** 31 Guilsborough I  
**C.J.,** 10 Carlyle Rd W5  
**C.J.,** 4 Denton St SW1E  
**C.J.,** 47 Ealing Pk Gdns  
**C.J.,** 34 Harvey Gdns S  
**C.J.,** 16a Stanley Rd SV  
**C.R.,** 169 Baring Rd SE  
**C.V.,** 4 Thurlow Ho,  
 Gracefic  
**D.,** 19 Balloch Rd SE6 1  
**D.,** 49 Kingsland, Browx  
**D.,** 25 Avondale Ct, Chui  
**D.,** 31 Dudley Ct, Endell  
**D.,** 16 The Chestnuts,  
 Hig  
**D.,** 141 Peabody Est Jof  
**D.,** 17 St Albans Mans,  
 Vancie

FIG.25

1996 BT Directory Detail, designed by Colin Banks

In 1986 (FIG 25) when the next change occurred under Colin Banks, the experience of the Americans was again drawn upon. The separating of business and residential subscribers, introduction of four columns for separate residential section, with repeat surnames dropped, were some of the changes. The exchange name or number (in this case 01-) is now deleted from all directories in which at least 40 per cent of numbers listed belong to that exchange and started to include postcodes. By separating business and residential subscribers, BT have been able to contain all residential numbers in two volumes (A to K and L to Z) and business in volume one, so reducing the previous four volumes to three.

The elimination of repeat surnames in the British directory was mainly conceived to combat line width. American line width was smaller, than English one, as English addresses tend to be longer, so some method of decreasing the length of lines was necessary. Dropping repeat surnames “saves a lot of space and perhaps it also makes for faster search”. (EVANS, BANKS, 96). This reasoning for repeat surnames seems very logical, so logical one wonders why it was not implemented earlier in both British and other directories? However, one needs to examine if, indeed, this tactic assists the search or inhibits it. Also, it needs to be studied in respects to legibility and vertical reading.

Surnames, in the 1996 directory, are in bold and are capped. Where they are dropped, the initials are indented two spaces, resulting in them appearing vertically listed beneath the surnames. This, when searching for information, results in easy pinpointing of the



surname on the page. With repeat surnames the search through the columns for a particular surname is made easier as it stands out at the margin. The initial letter is then searched for by easily scanning down under the name. This layout is easily searched, saving the time of the customer as well as space.

Where turnover lines appear they are aligned on the right, three spaces from the number, so as to read vertically from the last letter on the line before. This wastes space, as the space from the end of address on non turnover lines is expanded to compensate for the extra space used when aligning turnover addresses on the right creating an irregular space which the eye fixates on amongst the dots.

The treatment of uppercase initials benefit BT's design. As they are increased in importance, and so need to stand out more from the address, their square shape and boldness allows the eye to see them without the interruption of the address information. The address, being smaller and in light, assists this, and also helps the colour of the page by creating tones and focusing points for the eye, making it less intimidating to the user. However, the elimination of the christian name, makes the presumption of knowing the address. With the occurrence of a string of the same initials, one cannot rely on the alphabetical arrangement of christian names to assist in the search. So, if you're looking for Jason Geary, you have to scan all the 'J' addresses (James, Jim, John) to identify by address which one is Jason. This alone





GEARY E, 70 Shirley Cres, Beckenham.....650 8703  
 J, 35 Brooklyn Rd, Bromley.....464 8536  
 J, 33 Gerdevin Dr, Wilmington.....(01322) 223372  
 J.R., 45 Derry Downs, Orpington.....(01689) 898314  
 K, 20d Park Rd, Bromley.....460 3800  
 K, 38 Wellsmoor Gdns, Bromley.....467 8330  
 N.F., 252 Shepherds La, Dartford.....(01322) 224169  
 N.R.E.,  
 11 Grasmere Rd, Bexleyheath.....(01322) 342080  
 P, 88 Conifer Wy, Swanley.....(01322) 669827  
 P.J., 2 Merton Gdns, Petts Wd.....(01689) 827793  
 P.L., 89 Tintagel Rd, Orpington.....(01689) 873764  
 R, 70 Felton Lea, Sidcup.....300 5232  
 S, 34 Crown La, Bromley.....464 2528  
 GEATER C.J., (Mobile),  
 66 Summerhouse Dr, Bexley.....0956 399626  
 J.A., 32 Fernheath Wy, Wilmington.....(01322) 523696  
 J.E., 22 Lesley Clo, Swanley.....(01322) 663403  
 R.J., 2 Marlborough Rd, Bexleyheath.....304 2244  
 GEBBETT J.G.,  
 9 Lansdowne Av, Orpington.....(01689) 853557  
 M.J., 48a Yester Rd, Chislehurst.....467 6051  
 P, 53 Great Thrift, Orpington.....(01689) 819559  
 P.S., 53 Great Thrift, Orpington.....(01689) 835929  
 GEBHARD F.H.,  
 9 Acacia Clo, Petts Wd.....(01689) 824693  
 GECELI M., 4 Selsey Cres, Welling.....304 6670  
 M., 4 Selsey Cres, Welling.....0956 258504  
 M.M., 4 Selsey Cres, Welling.....0956 258544  
 GECIM T., 56 Chatham Av, Bromley.....462 2051  
 GEDDES A.H., 60 Belmont La, Chislehurst.....467 3679  
 Dr C.J.M., 17b Rectory La, Sidcup.....302 3634  
 E.T., 2 Morland Av, Dartford.....(01322) 226030  
 I.A.E., 25 Sutcliffe Rd, Welling.....303 9322  
 J, 19 Perry St Gdns, Chislehurst.....467 5509  
 M.L.H.,  
 21 Cray Valley Rd, St. Mary Cray.....(01689) 838715  
 N.M., 11 Stanley Rd, Orpington.....(01689) 832278  
 R, 14 Ridgeway Cres, Orpington.....(01689) 826681  
 R.C., 11 Scotts La, Bromley.....460 3123  
 GEDGE Dr D.R.,  
 24 Ravenswood Cres, W Wickham.....776 1763  
 G.D., 69 Erith Rd, Belvedere.....(01322) 448245  
 H.N., 5 Charles Ct, Avenue Rd, Erith.....(01322) 349722  
 M.R., 155 Wren Rd, Sidcup.....302 5110  
 GEMMELL Dnld. J., 61 Days La, Sidcup.....302 9016  
 S.G., 158 Lancing Rd, Orpington.....(01689) 839707  
 GEMMER S., 34 Mangold Wy, Erith.....311 8675  
 GENDERS J.P.,  
 386 Court Rd, Orpington.....(01689) 825244  
 GENIKIS P., 16 Marina Dr, Welling.....856 3054  
 GENNERY B.W.,  
 144 Lullington Cres, Orpington.....300 8563  
 G.H.,  
 48 Chorley Wood Cres, Orpington.....(01689) 812964  
 G.H., 48 Chorley Wood Cres,  
 Orpington.....(01689) 812694  
 G.H., 48 Chorley Wood Cres,  
 Orpington.....(01689) 812693  
 G.H., 48 Chorley Wood Cres,  
 Orpington.....(01689) 812963  
 G.H., 49 Chorley Wood Cres,  
 Orpington.....(01689) 812997  
 GENNOE G.M.,  
 17 Pondfield Rd, Orpington.....(01689) 851491  
 S.M., 2/42 Cambridge Rd, Bromley.....290 6243  
 GENONI K.R.,  
 74 Barnfield Wd Rd, Beckenham.....650 5756  
 GENT Eric E., 468 Hurst Rd, Bexley.....(01322) 522117  
 K, 2 Cranleigh Ho, Overbury Av, Beckenham.....650 2310  
 M.J., 17a Crescent Rd, Bromley.....464 1430  
 P, 1 Hilborough Wy, Farnborough.....(01689) 857606  
 P, 61 Nurstead Rd, Erith.....(01322) 437107  
 R, 17 Malmains Wy, Beckenham.....650 7695  
 R.A., 5 Gloucester Av, Sidcup.....302 9405  
 S, 5 Stapleton Rd, Bexleyheath.....(01322) 446071  
 V.J., 57 Wickham Chase, W Wickham.....777 2718  
 GENTLE R.L., 40 Village Wy, Beckenham.....650 3295  
 GENTLEMAN W.T.,  
 50 Unicorn Wlk, Greenhithe.....(01322) 370922  
 GENTRY B., 13 Ruskin Dr, Welling.....301 0274  
 D.H., 9 Oakwood Dr, Bexleyheath.....(01322) 551950  
 E, 168 St. Vincents Rd, Dartford.....(01322) 279663  
 G, 19 Hayes Chse, W Wickham.....777 4204  
 G.G., 22 Mill Va, Bromley.....460 5869  
 H, 118 Fair Acres, Bromley.....460 4525  
 H.J., 42 Highfield Rd, Bromley.....467 5002  
 J, 52 Andorra Ct, Widmore Rd, Bromley.....290 6420  
 J.E., 39 Southlands Rd, Bromley.....466 5598  
 J.W., 7 Turnpike Ct, Bexleyheath.....303 2213  
 M.G., 15 Ash Rd, Hasted.....(01322) 274581

results in the listing being dysfunctional, regardless of its approachability (FIG 26).

Banks' input is reflected in the overall design, which has the refinements of a designer's handling displayed in the use of repeat surnames and smaller light address. However, replacement of initials for christian names is a serious lapse on the part of the designer in his analysis of usage.

FIG.26

1996 BT Directory Detail, designed by Colin Banks



The discussion in this chapter, will involve the evaluation of the Telecom Eireann directory design through the course of this century. The structure of telephone numbers will be discussed as an indication of the development of the Irish telephone network. The current directory redesign will be discussed in comparison to the current BT directory design.

The Telecom Eireann Directory has been quietly transformed over the course of this century. The upcoming 1997 directory is no exception. Ten years after Colin Banks' redesign hit the streets and 20 years after Matthew Carter and Wim Crouwel contributed to this area with their designs, Telecom Eireann, too, has adapted. They changed the typeface, have separated business and residential, and have dropped repeat surnames. This new layout has already been implemented in the 06 area last year.

Telecom Eireann's directory has not experienced the number of changes as BT or the Dutch PTT. In fact, the British tailed the Americans, and the Irish have followed the British example. "The directory business is influenced by what's happening globally, people looking at different directories." (EVANS, FITZPATRICK, '96) Colin Banks also stated that he had a fine collection of directory pages. (KINROSS, '95, PG 6) "I think there is an amount of copying." (EVANS, FITZPATRICK, '96). It is evident how the layout of BT, America and The Dutch PTT have influenced





Telecom Eireann designs. In fact, one might question why more consideration of design was not taken by Telecom Eireann sooner. But different countries at certain stages were at different levels of development in their use of telephones. Telephone numbers and the use of area codes act as an indication of this.

At present our telephone numbers have a sequence which reveals the county, locality and the stage at which we received our telephone. By following the building of the telephone number structure, an indication as to the growth of the telephone network in a country can be given. The truth is, the use of a telephone directory was not necessary by most households when an operator switch board was the method by which phone calls were made. This situation ultimately ceased in 1991, although automated dialling was primarily in use since the mid-eighties, when the world was on the verge of internet and fax machines. Britain had a completely automated system in 1974. Ireland, on the other hand, did not achieve this standard until the mid-eighties.

The major developments in the British telephone network also corresponded with those in its telephone directory. For instance, in 1912, with 700,000 subscribers, the first public automatic exchange in Britain was opened at Epsom. In 1927 the first large automatic exchange in London was opened. These developments corresponded with the telephone directory, as in 1927 when a switch from two to three columns was necessary. So, could the the fact that the Irish



directory lagged behind the British in layout be due to the slower development of the telephone service? Certainly the split with the department of Posts and Telegraph in 1984 leading to the creation of Telecom Eireann corresponded with a split also in the telephone directory (from one single directory to four provincial and one 01 Dublin area directory). However, this was primarily due to a vast increase in subscribers. Changes of 1996 were "geared towards saving space and saving paper." (EVANS, FITZPATRICK, '96) Telecom Eireann "now have 770,000 subscribers. Last year we paid 51% more than the book in '95. This year we think we got a reduction of 21%. So obviously the focus is on paper, in its amount, and then how best you can use the amount of pages." (EVANS, FITZPATRICK, '96) It's the same objective of all directories.

In the early years of the Irish directory (1920 - 1930), it was published every two months. Now, however, it is published every two years. Definitely the growth in subscribers is now not as large as in previous decades. "You will reach a stage where everyone who is going to have a phone will have one. At the moment the penetration level is 90%," which is quite high. (EVANS, FITZPATRICK, '96) The effect of all this is ultimately the stabilising of the number of subscribers, hence the number of listings will also stabilise. In order to further investigate the area of directory design in Ireland and to trace its development up to the new design of 1996, this thesis will look at the refinements which took place from 1920 through 1996.





Dún Laoghaire	85351	Moore F.	50 Trees rd, Mt. Merrion
An Uaimh	55	Moore F. J., Physician & Surgeon	Academy st
Dún Laoghaire	81133	Moore F. & M., Newsagent, Tobenst,	15 Glasthule rd., S'cove
Dublin	535851	Moore Francis J., Licensed Vintner	Blackhorsebridge, Tyrconnell rd
Dublin	63264	Moore Major-Gen. Francis Malcolm	The Poplars, Sydney par
Dublin	69115	Moore Mrs. Frank	44 Nutley pk, Stillorgan rd D'brook
Dublin	51398	Moore Frank	71 Harcourt st
Dublin	97956	Moore Frederick	36 Highfield rd, R'gar
Ballina	183	Moore Rev. G., C.C.	Riverslade
Dublin	77128	Moore, Gamble, Carnegie & Co., Govt.	3 College gn
Dublin	92097	Moore G. Cyril, P.O.	12 Maxwell rd. R'gar
Ballintra	4	Moore George, Veterinary Surgeon	Ballinacarrick
Ballintra	5	Moore George, Veterinary Surgeon	Ballymagroarty
Dún Laoghaire	83092	Moore Geo. T.	5 Shanganagh ter., Killiney
Dún Laoghaire	84844	Moore Mrs. Georgina	10 Longford ter., Mnkstown
Dublin	77118	Moore Gerald J. Incorporated Acctnt	31 Dame st
Dún Laoghaire	82555	Moore Gerald J.	57 The Rise, Mt Merrion pk, B'rock
Dún Laoghaire	83152	Moore Godfrey B.	33 Albert rd, S'cove
Dublin	61678	Moore G. T. & Co. Legal Acctnts	14 S Frederick st
Dún Laoghaire	81260	Moore Guy B.	Glencoe, Knapton rd
Dublin	61834	Moore Professor Henry, M.D., D.Sc., F.R.C.P. (I. & Lond.)	58 Fitzwilliam sq
Dún Laoghaire	83309	(Resdce)	Susquehanna, Killiney
Dublin	41653	Moore Henry	48 Annamoe rd, Cabra
Dublin	64660	MOORE H. G. & CO., Radio Sales, Service	22 Dawson st
Dublin	335611	Moore Capt. H. J., Cars for Hire	396 Howth rd, Raheny
Dublin	95306	Moore H. J., O.B.E., L.L.B.	Innisfree, Orwell rd, R'gar
Dún Laoghaire	83061		
Dún Laoghaire	83288		
Dublin	51979		
Dún Laoghaire	85086		
Dún Laoghaire	82691		
Carlow	190		
*Dublin	76954		
Dublin	338381		
Middleton	29		
Dublin	97658		
Cork	20468		
Dublin	93413		
Cork	22685		
Cork	20368		
Dún Laoghaire	81532		
Dublin	60277		
Dún Laoghaire	84863		
Sutton	444		
Dublin	335479		
Dublin	94093		
Ballyhaunis	37		
Ballybunion	19		
Dublin	335117		
Dublin	448681		
Dublin	336833		
Dublin	54016		
Clonmel	226		
Greystones	249		

FIG.27

1920-50 Telecom Eireann Directory Detail

The directory used from 1920 to 1950 consisted of a layout and page size radically different to what we are now commonly used to. The page size is smaller than A4 and has more of a book appearance in respect to size. It has two columns with a very small gutter width but a vertical line separating the columns to prevent reading on to the next column.(FIG 27)

The exchange name and number precede the surname in much the same way as the number did in the 1977 Dutch directory. However, the surname is alphabetically listed and is succeeded by the christian name or business description of the subscriber. At this time the majority of phone users were businesses so lengthy descriptions were necessary and took up a large amount of space. The address information forms the conclusion to this sequence of information.

The unusual use of both serif and sans serif typefaces, coupled with their use in the design, is interesting in relation to the perception of the information by the designer or reader and in the search for information. With the exchange name in sans serif and all other information in the lighter serif typeface the exchange name acquires greater dominance in the overall layout. If one is familiar with the town or exchange name of 'Moore Henry' then on locating the commencement of that particular surname the searcher need only scan the exchange names and when the relevant one is located, refer back to the surname to obtain the telephone number. In this case the address is



only necessary as verification when 'Moore Henry' is located.

The dominance of the exchange name is challenged by the disorderly clumped and confusing appearance of the address information. The smaller size of the type united with the smaller space between the lines and the inconsistent manner which the address is aligned contribute to this while also diminishing the ability to link the surname with its particular address. It is also interesting to note the length of the number which ranges from two to five digits, hence, the network was more advanced where the number is longer. The overall appearance is one of confusion and scattered information.

Although it may now seem impossible to use comfortably and efficiently, it was the conventional layout of the time. If one compares this layout with that of the British 1912 layout, you will notice the common manner of retrieving the desired telephone number and layout. However, where the British had reverted to the more commonly used layout of today in 1926, ceasing to precede alphabetically ordered surnames with numbers or exchange names, and adopting the arrangement of surname and address information together, The Irish directory did not drop this structure until 1970.

The 1970 structure (FIG 28) reached a standard more in line with today's structure. It is a three column layout with surnames alphabetically listed, followed by a space of one character and then the name and address. A serif light typeface is still in use with sans serif typeface for towns dismissed. The printed matter is very light overall with no differentiating elements to focus on, leading to a lack of





Enright Donal, 16 Glendale pk 12.....	50 41 32
Enright Ernest, 27 Ardeullen ave 5.....	31 15 25
Enright Mrs. F, 24 St Aidan's pk 3.....	33 65 53
Enright G.E, BSc, 14 Wyckham pk 14.....	98 13 31
Enright Jas, 26 Sarto rd 5.....	32 32 51
Enright Msgr. Jas. F, 22 Marine dr 4.....	68 99 08
Enright John, 49 Foxfield pk 5.....	32 35 82
Enright John F, 16 Maywood pk 5.....	31 47 38
Enright L.J. BE, AMICE, 119 Dublin rd, Sutton.....	32 33 72
Enright Mrs. M, 102a Phillipsburgh ave 3.....	37 46 00
Enright M.J, 33 Bird ave 14.....	98 60 58
Enright Noel, 30 Templeville dr 6.....	90 47 80
Enright Patk, 33 Shanboley rd 9.....	37 32 26
Enright Patk, 14 Wigan rd 9.....	30 39 48
Enright Wm, Car Dlr, 44 Queen st 7.....	77 06 29
Ensor Brian R, 13 Argyle rd 4.....	68 99 41
Ensor Wm, Dowson, 10 Tudor rd 6.....	97 42 06
Entwistle L, 6 David rd 9.....	30 24 33
<b>EPILEPSY ASSOCIATION, IRISH,</b>	
30 Leeson pk 6.....	97 57 73
Epoch Enterprises Ltd, Imptrs, Exptrs, 59 Whitworth rd 9.....	30 42 22
Epoch Enterprises Ltd, 4 Shopping Centre, Edenmore 5.....	31 13 05
Eppel El. W, MB, BCh, BAO, 202 Kimmage rd W 12.....	50 48 13
If no reply ring.....	88 68 51
(Res) Lakelands, Templeogue rd 6.....	50 48 13
Eppel Isaac, 206 S.C. rd 8.....	75 28 08
Eppel Ramon, Site 22 Sheldon pk 12.....	50 19 64
Eppel Ramon, FAOI, Ophth Optcn, 4c Upr Clanbrassil st 8.....	75 28 80
Eppel Stanley J, Financier, 4c Upr Clanbrassil st 8.....	75 28 80
Eppel Mrs. Trudy A, 4 Greenlea rd 6.....	90 67 57
Epstein D, LDSRCSI, Dent Surgn, 144 Sundrive rd 12.....	75 49 72
(Res) 9 Cherrywood rd, Loughlinstown.....	85 53 11
Epstein David, 9 Wainsfort dr 6.....	90 09 18
Epstein Mrs. Isobel, 10 Oaklands cres 6.....	97 27 75
Epstein Melvyn, 95 Fairways est 14.....	90 64 79
Epstein Philip, 57 Greenlea rd 6.....	90 90 77
Epworth Hall (Wesley Coll), Winton rd 6.....	6 17 23
Espey Fred J.K, 22 Bellevue rd, G'geary.....	80 78 32
<b>ESPLANADE HOTEL, Bray.....</b>	<b>86 20 56</b>
(Visitors).....	86 31 81
Esquire, Newsagency, Tobecnst, 32 Harmonstown rd 5.....	31 10 51
<b>ESQUIRE Ltd, Men's, Boys' Stylists, 27 Sth Gt Georges st 2.....</b>	<b>77 76 05</b>
Essential Hygienics, 82 Kincora ave 3.....	33 77 10
Esses A, 136 Merriem rd 4.....	69 22 39
Esses Clement, 4 Nutley rd 4.....	69 10 57
<b>ESSES M. I. &amp; SONS, Ltd, Imptrs &amp; Genl Mchts, 9 Eustace st 2.....</b>	
Stores, 12 Sycamore st 2.....	77 80 10
Essig Mrs. Catherine, 1 St Pappins gn 11.....	37 25 48
<b>ESSO PETROLEUM COMPANY (IRELAND) Ltd, Order Dept, Dublin Terminal, Alexandra rd 1.....</b>	
Head Office, Stillorgan.....	88 16 61
Esso Aviation, Dublin Airport.....	37 89 76
(See also Part 2)	
Estate Duty Office, 72 St Stephen's gn 2.....	6 03 11
Estate Management & Supply Association Ltd, (Supply Depot) 101 Grafton st 2.....	77 15 61
(See also Part 2)	
Estate Service Station, The, Stillorgan rd, Mt Merrion.....	88 66 86
Estates & Farms Advisory Service Ltd, Farm Mgrs, 17 Baggot st Upr 4.....	68 30 50
Esthers, Hair Stylist, 69 Lr Clanbrassil st 8.....	75 64 61
Etchingham K.P, Bealtaine, Windgate, Bray.....	86 39 64
Ethiopharm Co, The, Mycofarm Agt, 106 Seville pl Nth 1.....	4 37 92
Eugene, Hair Stylist, 188 Whitehall rd, T'nure 12.....	50 36 39
Eumig Distributors (Slattery Allan & Co), 41 Parnell sq 1.....	4 08 29
Eurauto Ltd, John F. Kennedy dr 12.....	50 70 55
<b>EUROCOLOR Ltd, Paint Mfrs, Sundrive rd 12.....</b>	
Eurofashion, Mantle Mfrs, 65 Dame st 2.....	77 03 67
Eurographic, 21 Seafeld cres, Stillorgan.....	69 43 62
Eurographics Ltd, Trade Platemakers, 18 Old Kilmainham rd 8.....	77 72 85

FIG.28

1970 Telecom Eireann Detail

case in the search of information. Lines are now filled out with dots as opposed to pairs of dots; names of exchange towns are still in use, which follow next in bold, some of which still vary from two to five digits.

As I have stated, the print is very light. This could indicate that the printing technology used has improved and is resulting in, as with the BT and Bell System directory in chapter one, very light print. This, however, gives a very bland appearance to the page with the eye getting lost in the white space. The large space between surname, christian name and address contributes to this situation, inhibiting one's ability to focus on any particular area of the line. It is interesting to note the development of town or exchange names at this point. The Dublin area directory (Part One of the book) uses five to six digits for numbers coupled with an (01) code in use, but not included in the layout. The country area in Part Two, however, still includes the exchange name, even though the area code system is developed and listed in the prefix. Telephone numbers are also ranging from one to five digits long. This inevitably reveals the slower establishment of the telephone rurally, while also having a great effect on the design and legibility of the page.

In 1983 certain aspects of the design have been improved and refined (FIG.29). The three column format has remained but there has been an introduction of a sans serif typeface with surnames and numbers in bold. Area codes are included in the design but in some cases the exchange name is still used. Most phone numbers are still five digits,





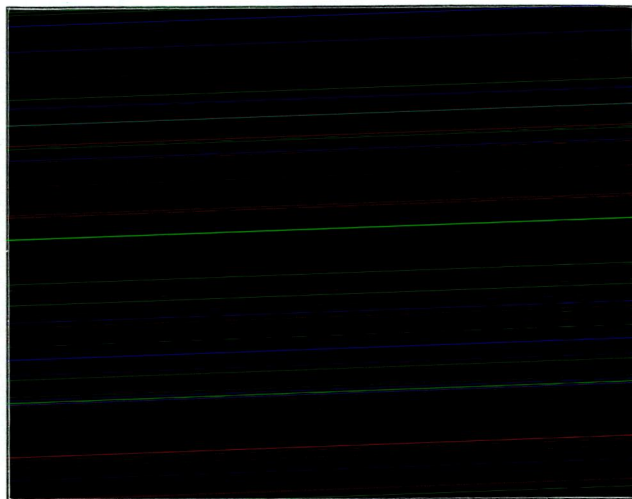


FIG.29 1983 Telecom Eireann (country volume) Detail

Doyle Patk M, 11 Wilson rd Mt Merrion	288 9465	Doyle Raymond, Bennetstown Dunboy
Doyle Patk Ml, 63 McIntosh pk 18	285 0787	Doyle Raymond E, Dairy Products Ag
Doyle Patk V, 7 Thornhill rd Mt Merrion	288 9908	36 Orwell pk Templeogue 12
Doyle Patsy, 11 Our Ladys rd 8	454 4079	Doyle Raymond F, 126 Cromlech Fields
Doyle Paul, 12 Marian pk B'rock	283 3419	Doyle Raymond & Lucy, 65 Kilgarron p
Doyle Paul, 178 Monksfield Monastery rd 22	459 1678	Doyle R C, Hilltop Edmondstown 16
Doyle Paul, 30 Dorney ct 18	282 2320	Doyle Reginald, 35 Connolly gdns 8
Doyle Paul, 33 St Peters rd 12	450 1607	Doyle Richd, 12 Avondale pk Bray
Doyle Paul, 36 Windsor ave 3	833 4884	Doyle Richd, 185 Captains rd 12
Doyle Paul, 39 Ardmore pk Kill ave D'laoire	284 2081	Doyle Richd, 34 Maplewood dr 24
Doyle Paul, 66 Castleknock ave 15	821 7706	Doyle Richd, 36 St Columbanus ave Mi
Doyle Paul, 2 Willbrook pk 14	493 2931	Doyle Richd, 37 Cherryfield ave 12
Doyle Paul, 24 Kinvara dr 7	838 3362	Doyle Richd, 37 Dodder vw 4
Doyle Paul, 3 Avondale lawn extn B'rock	288 7432	Doyle Richd, 51 Kildare rd 12
Doyle Paul, 44 Balrothery est 24	451 3248	Doyle Richd, 63 Carrigwood 16
Doyle Paul, 72 Ballygall cres 11	834 5486	Doyle Richd, 72 Rockford pk B'rock
Doyle Paul A, Ash Idg Curragh rd Ratoath	825 6306	Doyle Richd, 77 Holly ct Ballybrack
Doyle Paul & Aine, 21 Rushbrook wy 6w	456 6493	Doyle Richd, 8 Measc cres 5
Doyle Paul & Anne, 65 Carrick ct Portmarnock	846 0265	Doyle Richd, 89 Ballinteer pk 16
Doyle Paul C, 5 Reuben ave 8	671 9868	Doyle Richd, Victlr, 15 Main st R'farni
Doyle Paul & Jacqueline, 7 Bayview cres Killiney	282 1234	Doyle Richd G, 109 Seapark dr 3
Doyle Paul & Lorraine, 22 Glenbourne Way 18	295 9225	Doyle Mrs Rita, 30 St Mobhi rd 9
Doyle Paul & Mary, 33 Beechwood Downs 15	820 2820	Doyle Dr Rita K J, St Helens Meath n

FIG.30 1995 Telecom Eireann (country volume) Detail

however, two digit numbers still exist. At this stage there is a separate book for the (01) area and one for the non-country areas. In 1984, when Telecom split with the Department of Post and Telegraphs, the directories for the country became separated into regional sections.

The 1983 design does not contain any real dramatic change, just simple refinements to what existed in 1970. It has, however, become somewhat more legible by changing the typeface to *Helvetica* and enhancing the ability of focusing on surnames by setting them in bold which also results in a less monotonous page appearance. This design has developed into a somewhat more balanced design in 1995 (FIG 30), with area codes in full use and all telephone numbers being at least five digits. Surnames and numbers are still in bold but addresses are in light. Turnover lines (information running onto the next line) are common and plentiful, with an indent of two character spaces.

Although the changes in the new 1996/97 design will not seem radically different, it can be viewed in terms of refinement of previous Irish designs. Although these changes do improve the search for information, they could be further improved with certain finer typographic details (such as; use of Bold or Caps), some of which can be examined in comparison with the present BT directory design.





Esquire Lounge,  
Cross Market st Tramore ..... (051) 8 13 24  
E.S.S. Electronic Eqpt Mfr,  
C7 Smithstown Industrial est Shannon ..... (061) 6 22 45  
Essame Andrew,  
Bahini Coxtown Dunmore East ..... (051) 8 32 25  
Essame M F, Rock hse Raheen rd Clonmel ..... (052) 2 17 92  
Esso Collins Ltd, Enagh Kilishen  
Staff ..... (061) 7 22 44  
Essen Ltd Forklift Trucks Unit 3a  
Courtstown Ind Estate ..... (021) 95 36 09  
ESSENTIAL CLEANING SERVICES,  
Contract Cleaners, 33 St Bridgets tce  
Prospect hill Galway ..... (091) 6 53 59  
Essential Engineering Co Ltd,  
Dublin rd Enniscorthy ..... (054) 3 38 99  
ESSENTIAL ENGINEERING CO Ltd,  
Mech Genl Engrg,  
Dublin rd Enniscorthy ..... (054) 3 41 93  
Essery H, 4 Riverside est Midleton ..... (021) 63 24 32  
Esses Clement,  
Fernhill Ballinacarrig Brittas Bay ..... (0404) 71 93  
Essilor (Ire) Ltd, Optical Mfrs,  
Bay E1 Raheen Industrial est Limerick ..... (061) 2 75 33  
Esso Filling Station, Academy st Navan ..... (046) 2 31 21  
ESSO TEORANTA  
Arklow ..... (0402) 22 48  
Athlone Castlemaine st ..... 0(0902) 7 26 37  
Moy Service Stn Station rd ..... (096) 2 17 87  
Birr ..... 0Birr 50  
Brosna Service Station ..... Birr 238  
Carlow Ring Portlaoise Plant ..... (0502) 2 13 37  
Carrick-on-Shannon ..... 0Carrick-on-Shannon 77  
Cavan Drumavanagh ..... 0(049) 3 19 69  
Claremorris ..... 0(094) 7 12 04  
Clonmel Prior pk Clonmel ..... 0(052) 2 18 43  
Cork Centre Park rd ..... 0(021) 96 54 33  
Dundalk Barrack st ..... 0(042) 3 41 54  
Enniscorthy Ring New Ross Terminal ..... (051) 2 11 12  
Fermoy ..... 0(025) 3 13 07  
Galway Bulk Plant Oranmore ..... 0(091) 8 41 56  
Kilkenny ..... 0(056) 2 10 68  
Letterkenny ..... 0(074) 2 29 30  
also ..... (074) 2 29 29  
Limerick Courtbrack ave ..... (061) 2 73 33  
Mallow ..... 0(022) 2 12 54  
Mullingar Lynn pk Industrial est ..... 0(044) 84 47  
Navan Ring Dublin Terminal ..... 74 70 61  
New Ross Marshmeadows ..... (051) 2 11 12  
also ..... (051) 2 11 58  
Portlaoise ..... 0(0502) 2 13 37  
Esso Aviation Svce Shannon Airport ..... (061) 6 12 17  
Sligo Finisklin ..... 0(071) 6 19 26  
Tralee ..... 0(066) 2 10 22  
Waterford Ring New Ross Terminal ..... (051) 2 11 12  
(See also Part 1)  
Estdy Jean-Paul & Mrs,  
The Rectory Donohill, Cappawhite 61  
Estate Management & Supply Association  
Ltd, Est Agt, 2 Nth Main st Naas ..... (045) 9 76 18  
35 Cecil st Limerick ..... (061) 4 54 33  
(See also Part 1)  
Eston Jas, 24 Upper St Josephs tce Athy ..... (0507) 3 19 75  
Eston Robt, 42 Church Hill Dunlavin ..... (045) 5 13 14  
Estoria Cinema, Arthur st Ballina ..... (096) 2 11 21

Euro Tools, Hdwr Supplrs,  
16 High st Limerick ..... (061) 4 09 08  
Euro Trailer Services Ltd,  
43 Laburnum Model Farm rd Cork ..... (021) 4 14 97  
Euro 2000, Hair Design,  
Crescent Shopping Centre Limerick ..... (061) 2 75 94  
Euro-Catering, 12 Shears st Cork ..... (021) 50 50 83  
Eurodiesel & Electrical,  
Shannon Bldgs Mallow rd Cork ..... (021) 50 99 77  
Eurogas, Redmond rd Wexford ..... (053) 2 31 33  
Eurogifts Ltd, 132 O'Connell st Limerick ..... (061) 4 78 02  
Eurolift Ltd, Hydraulic Platforms,  
Little Island Industrial est Cork ..... (021) 95 30 11  
EuroMachines (M J McDonagh Ltd),  
Ballindoon ..... (071) 7 51 68  
Euro-Optics, Spectacle Frames,  
6 Anglesea st Cork ..... (021) 2 65 51  
Europa Blinds, 1a High st Limerick ..... (061) 4 00 88  
Europa Cafe, 38 Peter st Drogheda ..... (041) 70 22  
Europaint Ltd, Old Blackrock rd Cork ..... (021) 96 66 58  
EUROPCAR RENT-A-CAR,  
Shannon Airport ..... (061) 6 16 18  
Cork Airport ..... (021) 50 40 90  
also ..... (021) 96 67 36  
Europe Hotel, Killybeg ..... (064) 3 19 00  
European Corporate Services Ltd,  
9 Kilmoney heights Carrigaline ..... (021) 88 28 90  
EUROPEAN HOTEL, Mgmt,  
East Beach Cobh ..... (021) 81 14 11  
Guests ..... (021) 81 16 92  
European Hybrid Ltd, Turkey Hatchery,  
Industrial est Tullow ..... (0503) 5 16 95  
European Manufacturing Corp Ltd,  
Cleaveragh Industrial est Sligo ..... (071) 20 10  
European Millemetre Diode Laboratory,  
University College Cork ..... (021) 50 83 75  
European Plant Sales Ltd,  
Industrial Machinery, Carrigwohill ..... (021) 88 31 41  
EUROPEAN RESEARCH INSTITUTE OF  
Ireland The Plassey Technological pk  
Castletroy Limk ..... (061) 4 32 99  
Europhonetics, Dial A Language,  
6 Sullivans qy Cork ..... (021) 2 49 55  
Europlast Teo, Polythene Converters,  
Gweedore Industl est Derrybeg ..... Bunbeg 127  
Euroquils Ltd, Bedding Mfrs, ..... Ballingearry 56  
Euroquipe Ltd, Power Washers,  
Farrenlea rd Cork ..... (021) 4 68 02  
Euroquipe Ltd,  
Pressure Cleaning Systems Pumps Hosing,  
Benmur Wilton ave Cork ..... (021) 4 12 22  
Euroseeds Ltd, Seed Mchts,  
Ballymountain Waterford ..... (051) 3 28 14  
Eurosil (Ireland) Ltd, Rubber Processors,  
E-Sil Works ..... Ballinrobe 68  
EUROSTONE Ltd,  
Gooldshill hse Mallow ..... (022) 2 16 81  
EUROSTYLE Ltd, Shirtmakers,  
Currys Rock Up John st Cork ..... (021) 50 62 11  
Eurotranslations, Translating/Interpreting,  
6 Sullivans qy Cork ..... (021) 2 60 93  
Eurotruss Oldcastle Ltd, Roof Trusses,  
Railway Yd ..... Oldcastle 9  
Eurotwins, Aircraft, Castletown Portroe ..... (061) 7 61 83  
Eurotype Ltd, Type Setters Comm Printers,  
16 Upr Mallow st Limerick ..... (061) 31 32 00

12 Beechwood ave Newcastle West ..... (0507) 3 14 51  
Evans A E, Kara Cardenton Athy ..... (0507) 2 55 48  
Evans Alan, Woodbeech hse Wolfhill ..... (0507) 2 55 48  
Evans Mrs Angela, 6 Montgomery tce ..... Moyville 185  
Evans Anthony & Teresa,  
Bishopslane Ballymore Eustace ..... (045) 8 42 79  
Evans Brendan, Ballintue Ballynacargy ..... (044) 7 31 54  
Evans Bruce, Mt Alexander Gorey ..... (055) 2 15 84  
Evans Bruce & Rose Marie,  
Little rd Dromiskin ..... (042) 7 24 61  
Evans C, Bldr, 3 Bellevue pl Skibbereen ..... (028) 2 13 14  
Evans Catherine M,  
Antoin Youghal rd Dungarvan ..... (058) 4 22 83  
Evans C H,  
Merem-a-ra Seafield lawns Dundalk ..... (042) 3 29 63  
Evans Danl J,  
6 Congress tce Fethard Co Tipperary ..... (052) 3 13 52  
Evans David,  
Ballysalagh Newmarket-on-Fergus ..... (061) 7 12 46  
Evans Donal, Restnt,  
42 Dublin st Monaghan ..... (047) 8 19 92  
Evans Donald, Killymarley Monaghan ..... (047) 8 11 06  
Evans Douglas,  
9 Woodlawn gro Cork rd Waterford ..... (051) 7 64 48  
Evans Douglas, Carrick Upr ..... Carrick 76  
Evans Edmond J, 23 William st Wexford ..... (053) 2 29 04  
Evans Edmund, Ballytarsna hse Oulart ..... (063) 3 62 86  
Evans Engineering,  
Poundlick Skibbereen ..... (028) 2 10 38  
Evans Eric, Electl Store, 79 Main st Gorey ..... (055) 2 18 54  
Evans Ernie ..... Glenbeigh 137  
Evans Frank, Lisnashannagh Stranooden ..... (042) 4 19 26  
Evans Geo, 62 Clonmore hts Mullingar ..... (044) 4 11 86  
Evans Geo, Reeks vw Killorglin ..... (066) 6 11 75  
Evans Jackai, Clondra ..... (043) 4 68 12  
Evans Jas,  
8 Glenthorn mews Dublin hl Cork ..... (021) 50 00 75  
Evans Jas, Murreagh Durrus ..... (027) 6 11 30  
Evans Jas, Bree Castleblayney ..... (042) 4 02 13  
Evans Jas, Templeusk Avoca ..... (0402) 62 86  
Evans Jas, 7 Altamont pk Kilkenny ..... (056) 6 26 21  
Evans Jas, Reclamation Contr,  
Balroe Ballynacargy ..... (044) 7 31 51  
Evans Jas H, 2 Friars Hill Wicklow ..... (0404) 7 77 75  
Evans J E, 71 Tola pk Shannon Airport ..... (061) 6 21 28  
Evans Miss Jennifer, The Square Bantry ..... (027) 5 04 01  
Evans John, Gortnakeare Tipperary ..... (062) 5 19 42  
Evans John, Carrickaderry Clontibret ..... (047) 8 06 17  
Evans John, Corleggan Nth Clontibret ..... (047) 8 06 11  
Evans John, Kentstown Navan ..... (041) 2 53 51  
Evans John, Killymarley Monaghan ..... (047) 8 24 85  
Evans John, Somerville Balrath ..... (041) 2 53 78  
Evans John, Bawndaw Gracedieu ..... (051) 7 69 18  
Evans John C,  
29 Clover In Skehard rd B'rock Cork ..... (021) 96 16 81  
Evans John O, Hillside ..... Birr 62  
Evans Jos, 12 Patrician cres Naas ..... (045) 9 60 08  
Evans Kathleen, Grallagh ..... Ballyvaughan 18  
Evans Kenneth, Engrg Wks,  
Poundlick Skibbereen ..... (028) 2 12 83  
Evans Kerl, Cartref Donnellan dr Loughrea ..... (091) 4 12 61  
Evans K H, Kellystown Drinagh ..... (063) 2 47 66  
Evans L, Weir ctge Ballinter Navan ..... (046) 2 13 51  
Evans Lifts Ltd, Lift Mfrs,  
54 Earlwood est Togher rd Cork ..... (021) 96 26 01  
Evans M, Military rd Crinkle ..... Birr 68  
Evans Mary, Filter Beds Ballymore Eustace ..... (045) 8 44 66





## 246 Burnham-King G

**BURNHAM-KING G.**  
 3 Elm Ter, Constantine Rd NW3 2LL...284 1402  
**BURNHAMS M.A.**, 126 Woodstone Rd SE23...699 7968  
**BURNI F.**, 11/125 Park Rd NW8 7JS...724 1720  
**BURNICLE J.**, 38 Endymion Rd N4 1EQ...348 8402  
**BURNIE D.**, 107 Elibank Rd SE9 1QJ...850 1170  
**D.M.**, 38 Earls Ct Sq SW5 9DQ...373 0341  
**J.B.A.**,  
 3/223 Putney Bridge Rd SW15 2PX...874 0140  
**M.E.**, 11 Monmouth Ho,  
 West Hill Rd SW18 5HS...874 3156  
**R.**, 26 Wulfstan St W12 0AH...740 8858  
**V.**, 13 Kiln Ct, Newell St E14 7JP...515 3326  
**BURNIGE H.W.**,  
 40 Wharnccliffe Gdns SE25 6DQ...653 7082  
**BURNIKELL C.**,  
 50 Cowdenbeath Pth N1 0LG...278 1076  
**G.M.**, 319 Shrewsbury Rd E7 8QU...472 2076  
**L.J.**, 50 Fair Oak Dy SE9 2QH...850 0676  
**M.**, 2 Clayton Ho, Homer St W1H 1HE...723 0759  
**R.M.**, 29 Church Av E4 9QY...527 6024  
**BURNINGHAM A.E.**,  
 45 Silkfield Rd NW9 6QU...205 5349  
**D.**, 15 Filey Ho, Usk Rd SW11 2RS...870 5312  
**D.A.**, 174 New Dr Av N13 6T...807 8877

## Where

**BURNS—contd.**  
**C.A.**, 31 Scott Ct, Silvert  
**C.D.**, 17a Durley Rd N1  
**C.D.**, 10 Goosey La E6  
**C.D.P.**, 43b Hornead F  
**C.E.**, 18 Desefans Rd S  
**C.E.**, 33 Paulitons Sq SV  
**C.G.**, 31 Guilsborough I  
**C.J.**, 10 Carlyle Rd W5  
**C.J.**, 4 Denton St SW1E  
**C.J.**, 47 Ealing Pk Gdns  
**C.J.**, 34 Harvey Gdns S  
**C.J.**, 16a Stanley Rd SV  
**C.R.**, 169 Baring Rd SE  
**C.V.**, 4 Thurlow Ho,  
 Gracefie  
**D.**, 19 Balloch Rd SE6 1  
**D.**, 49 Kingsland, Broxw  
**D.**, 25 Avondale Ct, Chui  
**D.**, 31 Dudley Ct, Endell  
**D.**, 16 The Chestnuts,  
 Hig  
**D.**, 141 Peabody Est Jo  
**D.**, 17 St. Albans Mans,  
 Kanc

FIG.31 1996 BT Directory Detail

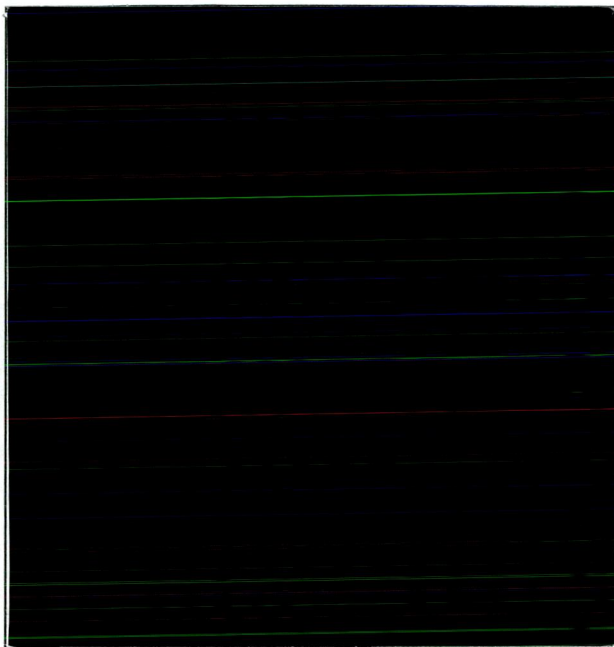
## COMPARISON OF CURRENT BT LAYOUT TO TELECOM EIREANN 1996 LAYOUT

Surnames in the BT directory are capped, and bold, resulting in descenders and ascenders not interfering with each other, also creating a clear differentiation as to where that particular surname begins. Initial letters are also capped and in bold, boosting their importance. Although the use of initials over the full christian name has been proven dysfunctional, their typographical treatment befits their status in the sequence of the searching process.(FIG 31)

Surnames in the Telecom Eireann '96 directory (FIG.32) are bold, appearing with a capital letter at the beginning of the name, then reverting to the continuance of the name in lowercase (taking on the structure which was used throughout Telecom Eireann design history), and also satisfying the rule 'capitals for names'. Although the surname stands out, it could be further enhanced by having it all-capped. With repeat surnames dropped, the importance of the christian name heightens. However, the christian name is given the same typographical treatment as the address, resulting in difficulty distinguishing the name from address. The search process of christian names could be enhanced by christian names appearing in bold. Telecom Eireann allow subscribers the choice by which their names appear in the directory. "In the case of husband/wife both first names or initials may appear... if concerned about giving details of your sex or marital status you can just use your initials...in the case of couples both surnames can





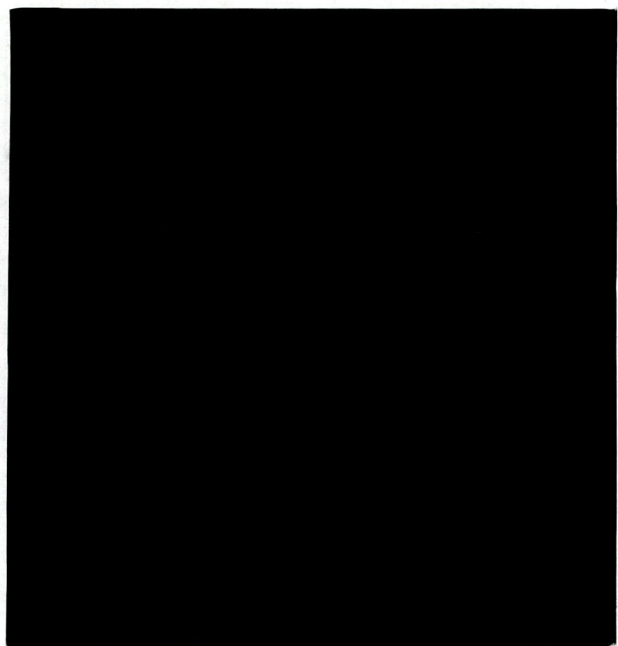


**FIG.32** 1996 Telecom Eireann (06) Directory Detail

appear..." (TELECOM EIREANN, '96 p. 90) This has the effect of inconsistency in the length of christian names, while also hampering their differentiation from addresses.

Christian names are preceded by a small dot, distinguishing them from turnover lines. This is crucial, as turnover lines are not indented and this may cause confusion. Although area codes are a vital component in our directory, they are not always essential when retrieving a telephone number. They also have an adverse effect when pinpointing a number due to their common (06) structure. Hence, the eye has a tendency to flow down. Perhaps a slight variance in their appearance from that of the telephone numbers would help relieve this problem.

Therefore, Telecom Eireann's omittance of capped, bold surname and bold, capped, christian name, coupled with their turnover lines not being indented, make the design less successful as the BT solution. This lapse in consideration of the finer typographical details (such as, use of bold, italics, all-caps, etc.) are, I feel, critical to the highest degree of legibility, consultability and approachability of a telephone directory page layout. These details were exploited by Wim Crouwel, Martin Majoor and Colin Banks in their designs for their respective directories. Although some aspects of what they tried may have had faults, at least there were further development in the area of telephone directory design. These may lead to a more perfect solution in the future, satisfying all considerations in this area. The Telecom Eireann directory





144 Drumgeely h'l Shannon (061) 47 40 40  
**Massy** Hugh, Stoneville Rathkeale (069) 6 40 30  
 J, Woodfield Broadford (061) 47 32 45  
 Jas, Elm View Ballingran Rathkeale Limk (069) 6 48 56  
**Masterson** Damien,  
 36 Merval dr Clareview Limk (061) 32 60 92  
 Declan, Sportsman Inn 51 Roches st Limerick (061) 41 73 61  
 J, 19 Shannamore pk Clareview Limk (061) 45 56 96  
 John J, 1 Oakland dr Greystones Limerick (061) 45 18 08  
 Mary, Luska Puckane Nenagh (067) 2 45 21  
 MI, 18 Colbert pk Janesboro Limk (061) 41 28 25  
**Masterson-Brown** Michelle,  
 14b Castlegrange Raheen (061) 30 10 44  
**Matchett** Brian Thos,  
 29 Tower dr Ballyduff Tralee (066) 3 13 05  
**Mather** Martin John, 48 Cahercalla hts Ennis (065) 4 24 32  
**Mathews** M, Clonroad Ennis (065) 2 12 64  
 M, J, Derrybeg Lisnalty Rosbrien (061) 22 90 40  
 Seadna, Killaderry Broadford (061) 47 33 47  
 S G, Byways Greenpark Limerick (061) 22 96 54  
 T J, Ballykissane Killorglin (066) 6 15 04  
**Mathiasz** P, 17 Elm pl Rathbane Limk (061) 31 49 01  
**Matingley** Douglas,  
 Carowmeanagh Kilshanny (065) 7 18 56  
**Matthews** Chris,  
 28 The Hermitage Mill rd Limk (061) 34 14 79  
 Clive R, 18 Edenvale Ennis (065) 2 19 58  
 Eamon DIP Arch MRIA,  
 St Annes Fort Mary pk Limk (061) 45 15 88  
 Georgie, Boherbradda Croagh Rathkeale (061) 39 65 73  
 Graham, 18 Hazel gro Newcastlewest (069) 6 16 72  
 John, Athea (068) 4 24 53  
 John, Carraward West Drumcollogher (063) 8 30 54  
 Larry, 8 Seaview Glenbeigh (066) 6 82 37  
 Martin, Mullagh rd Miltown Malbay (065) 8 41 58  
 Mrs Mary, Doona Milford Rathluir (063) 8 00 07  
 Nora, 9 Daltons tce Athea (068) 4 22 83  
 Rose MISCP, Dykegate st Dingle (066) 5 21 62  
**Maume** John, Gurtacurrig Kilfinane (063) 8 61 22  
 Norah, Ballyculleen Croom (061) 39 74 61  
 Thos, Gurtacurrig Kilfinane (063) 8 61 51  
**Maun** John Martin, Moig Askeaton Limerick (061) 39 23 45  
 Nora, Moig sth Askeaton (061) 39 80 98  
**Maune** Christopher, Milltown Askeaton (061) 39 80 24  
 H, Grange Newcastle West (069) 6 26 44  
 Nolene, 35 Plunkett rd Askeaton (061) 39 81 38  
 Patk, Ballinvira Croagh Limk (061) 39 69 54  
**Maunsell** Brendan,  
 Cahernade Abbeydorney Kerry (066) 3 52 25  
 Dominick, Old Mill Newcastle West (069) 6 23 89  
 Mrs Ellen, Glenlara Garryspillane (062) 4 66 69  
 Frank, Caherbreagh Tralee (066) 2 89 28  
 Frank, Lisnagree Camp Tralee (066) 3 94 08  
 Hannah, Tullig Castlegregory (066) 3 92 54  
 Jas, 3 Ballinorigi cl Tralee (066) 2 00 83  
 Mrs Joan, 2 Glenard Monavalley Tralee (066) 2 43 89  
 John, 56 Laurel court Oakpark Tralee (066) 2 66 52  
 John, Duagh Camp Tralee (066) 3 01 94  
 Jos, Lerrig Ardfer (066) 3 42 53  
 M, Ballyhoneen Cloghane Tralee (066) 3 82 72  
 M, High rd Castlegregory (066) 3 94 49  
 Mgt, Ballyconnell Kilfynn Tralee (066) 3 50 28  
 MI, Ballyhoneen Cloghane Tralee (066) 3 81 63  
 Philip, Lerrig Ardfer (066) 3 45 40  
 Sean, Lerrig Ardfer Tralee (066) 3 46 79  
 Thos, Fortwilliam Abbeydorney (066) 3 52 54  
 Tommy, Caherbreagh Tralee (066) 2 04 76  
**Maurice** H, Aughrim Scariff (061) 92 17 24  
**Maury** Rene, Castlequin rd Cahirciveen (066) 7 22 56  
**Mawhinney** Andrew & Barbara,  
 31 Revington pk NCR Limk (061) 32 51 57  
**Mawson** L, Knockclovaun Killaloe (061) 37 67 38  
**Maxwell** Anne,  
 Ardara Church vw Sixmilebridge (061) 36 93 97  
 B, Glenaguile Toomevara (067) 2 61 03  
 Colm, 79 Aidan pk Shannon (061) 36 20 14  
 Eugene, 16 Stradbally Nth Castleconnell (061) 37 79 53  
 Fergus, Pound st Sixmilebridge (061) 36 92 18  
 Jas, Scarrough hse Dundrum Tipp (062) 7 11 50  
 John, Ballybrack Annacarty (062) 7 15 60  
 John, Castletown Pallaskenry (061) 39 37 15  
 John, Glenaguile Toomevara (067) 2 60 46  
 Jos, 12 Silverview Nenagh (067) 3 26 13  
 K & D, 63 Cronan gdns Shannon (061) 36 24 07  
 Kevin, 26 Shallee dr Ennis (065) 2 97 45  
 Malachy, Ballinamuddagh Giin (068) 3 44 50  
 Marcella,  
 120 Kilnasoolagh pk Newmarket On Fergus (061) 36 81 97  
 Marjie, Ballymacady Bansa Tipp (062) 5 44 54  
 Patk J, Rathnaleen Nenagh Tipp (067) 3 36 74  
 Raymond, 7 Lodge rd Sixmilebridge (061) 36 92 23  
 Robt, The Runalow Clonsire rd Adare (061) 39 65 09

Jas N, Sheemaun Clareabbey Clarecastle (061) 47 40 40  
 Jimmy, Gortnahaneboy E Rathmore Kerry (069) 6 40 30  
 J J, Illane Miltown Malbay (061) 47 32 45  
 John, Dromelia Murroe Limk (069) 6 48 56  
 John, Fintramore Miltown Malbay (061) 32 60 92  
 John, Glenahoghish Ballylanders (061) 41 73 61  
 John, Glendine Miltown Malbay (061) 45 56 96  
 John, Martinstown Kilmallock (061) 45 18 08  
 John J, Rathreigh Ardagh (063) 8 81 54  
 Jos, Knockliscrane Miltown Malbay (069) 7 63 87  
 Jos, Askeaton hse Askeaton (065) 8 47 90  
 Jos, Cowpark Kilcormon Askeaton Limk (061) 39 22 63  
 M, 2 Ballygannan rd Ballynanty Limk (061) 39 35 74  
 M, 27 Doonard cres Tarbert (061) 45 28 39  
 M, Carrons Kilcormon Ardagh (068) 3 63 42  
 M, Milford Miltown Malbay (069) 6 02 60  
 Mrs Mgt, Cragg Lissycasey Ennis (065) 8 45 82  
 Mary, 2 Archbishop Mannix tce Charleville (065) 3 44 85  
 Mary Ann, Church st Miltown Malbay (063) 8 17 43  
 Mrs Maureen, Tiernaglohane Cooraclare (065) 8 40 62  
 M F, Shanaway rd Ennis (065) 5 90 62  
 M G, Bulgaden Hall Kilmallock (065) 2 31 40  
 MI, Ballingoola Grange Kilmallock Limk (063) 9 80 51  
 MI, Freigh Miltown Malbay (061) 39 00 85  
 MI, Knockiscrane Miltown Malbay (065) 8 41 04  
 MI, Tiernaglohane Cooraclare (065) 8 42 72  
 MI, Coolcappa Ardagh (065) 5 92 53  
 MI, Shanbally Kilcormon Limk (069) 7 63 41  
 MI ACCA, Drombeg Athlaca (061) 39 35 14  
 P, Kilcormon Ardagh (061) 39 37 40  
 Pat, Ballybran Tuamgraney Clare (069) 6 05 01  
 Patk, Ballintubber Kilfinane (061) 92 30 01  
 Patk, Ballyvaskin Miltown Malbay (063) 9 12 52  
 Richd, 51 Glenview gdns Limerick (065) 8 42 21  
 S, 50 Lee est Limk (061) 45 47 74  
 S, Tara Mullagh Ennis (061) 41 89 60  
 Sean, Fahá Patrickswell (065) 8 71 01  
 T, 10 St Francis Pl Limk (061) 35 55 34  
 Terry, 30 Kincora pk Ennis (061) 41 53 35  
 Tom & Maria, Carrowmere Quin (065) 2 14 41  
 W F, 11 Springfield dr Dooradoyle (065) 2 59 52  
 Wm, 9 Church rd Knocklong (061) 22 96 35  
**Meagher** Anthony, 55 Flood st Limerick (062) 5 32 53  
 Augustine, Church vw Oola (061) 41 86 17  
 B, 6 Clarke ave Janesboro Limk (062) 4 77 38  
 Denis, Monanore Toomevara (061) 31 47 72  
 Donal, Garriecoona Kilmallock (067) 2 62 05  
 Dr Donal J, Lallys Lodge Lahinch (063) 8 93 77  
 Edmond, Cudville Nenagh (065) 8 13 30  
 Jas, 2 Mount Patrick vlas Limk (067) 3 10 93  
 Jim, Castletown Portroe (061) 41 76 47  
 John, 151 Lawnway Carew pk Limk (067) 2 34 17  
 John, Monanore Toomevara (061) 41 36 20  
 John, Monsea hse Ballycommon (067) 2 60 25  
 Jos, Oola (067) 3 32 24  
 Mrs Mgt, Circular rd Ennistymon (062) 4 76 33  
 MI & Patricia, (065) 7 11 85  
 17 Springfield Clonroadmore Ennis (065) 2 20 25  
 Padraig, Portroe Nenagh (067) 2 34 92  
 Patk, Grennanstown Toomevara (067) 2 61 23  
 Raymond M, 65 Whitethorn dr Limk (061) 45 28 79  
 Richd, 10 Fr Matthew st Tipperary (062) 5 19 02  
 Seamus, 4 Abbey View vlas Tipp (062) 3 34 34  
 Sean, 51 Sarsfield st Nenagh (067) 3 27 26  
 T F, Bothar Padraig Palmershill Cashel (062) 6 12 71  
 Thos, 41 Yewstown Nenagh (067) 3 14 28  
 Thos, 9 Lr Ormond st Nenagh (067) 3 15 46  
 Thos, Lisnacory Ballygarry Roscrea (067) 2 12 87  
 Timothy, Glassdrum Cappawhite (062) 7 52 66  
 Wm, 19 Ballygraigue E Nenagh (067) 3 37 15  
 W J, Oola Limk (062) 4 75 25  
**Meagher** Foran Eileen & Brendan,  
 6 Fr Matthew st Tipp (062) 3 35 60  
**Meakins** Graham & Rose,  
 Deepark Newmarket-on-Fergus (061) 36 92 08  
 Stuart & Mary,  
 17 Belfield cres Farranshone Limk (061) 32 79 45  
**Meally** Paud,  
 33 Beechwood gro Sixmilebridge (061) 36 91 81  
**Meaney** A, 15 Ard Mhuire Newport (061) 37 84 26  
 A, Labasheeda Kilrush (065) 3 02 34  
 Anthony, Noan Ruan (065) 3 79 37  
 B, Crovraghan Kildysart (065) 3 22 23  
 Bernard, Boloughera Lissycasey Ennis (065) 3 49 22  
 Brian, 21 Cherry ave Caherdavin lawn Limk (061) 45 15 18  
 C, 30 Aidan Pk Shannon Airport Clare (061) 36 30 56  
 Christy, Ballyogan More Tubber Clare (065) 3 78 96  
 Christy, Carhugar Quin (065) 2 56 00  
 D, 26 Stoneyhurst Dooradoyle Limk (061) 30 23 69  
 Dan, 69 Shellebourne pk Limerick (061) 45 13 75  
 Denis J, Cherryville Rathuard Limerick (061) 41 46 63

MI, 7 St James court Ennis rd Limerick (065) 2 91 39  
 MI, Decmade Lissycasey (064) 5 83 44  
 MI, Greenhills Crecora (065) 8 47 50  
 MI, Raheen Ballyneety (061) 38 63 05  
 MI, Rineen Corofin Ennis (065) 8 41 68  
 MI, Tullabrack Moyasta Cooraclare (062) 4 67 53  
 Noel & Sheila, Clohanmore Cree Kilrush (065) 8 48 36  
 Oliver, 9 Merval cres Limk (063) 8 81 54  
 Owen, Francis st Kilrush (069) 7 63 87  
 Pat, Ranaghan Corofin (065) 8 47 90  
 Patk, 12 Sheelin rd Caherdavin pk Limk (061) 39 22 63  
 Patk, 26 Golf Links rd Ennis (061) 39 35 74  
 Patk, 34 Kincora pk Lifford Ennis (061) 45 28 39  
 Patk, Callan vw Boloughera Lissycasey (068) 3 63 42  
 Patk, Clonkerry Labasheeda (069) 6 02 60  
 Patk, Curra Drumcollogher (065) 8 45 82  
 Patk, Windmill Cashel (065) 3 44 85  
 Patk, Woodpark Newmarket on Fergus (063) 8 17 43  
 Patk & Rosemarie, Drumadrehid Ennis (065) 8 40 62  
 Paul, 6 Dernish lawn Shannon (065) 5 90 62  
 R, 42 Belfield cres Farranshone Limk (065) 2 31 40  
 R & A, Winterwood Ballycough Limk (063) 9 80 51  
 Roy, 6 Barrington st Limk (061) 39 00 85  
 Sean, 1 Hawthorns Annacotty Limerick (065) 8 41 04  
 Sean, 24 Monaleen pk Castletroy Limk (065) 8 42 72  
 Sean, 30 Abbey ct Ennis (065) 5 92 53  
 Sean, Cloneenagh Cree Kilrush (069) 7 63 41  
 Sean, Boloughera Lissycasey (061) 39 35 14  
 Senan & Helen, Boloughera E Lissycasey Ennis (061) 39 37 40  
 Stephen S, Greenpark Ennis (069) 6 05 01  
 Ted, Kilrush Knocklong (061) 92 30 01  
 Thos, Cregard Barefield Ennis (063) 9 12 52  
 Thos J, Clare rd Ennis (065) 8 42 21  
 Thos P, Doolin SCR Limk (061) 45 47 74  
 Tim, Blainmore Knock (061) 41 89 60  
 Tom, Cranny Kilrush (065) 8 71 01  
 Tony, 1 Ardara Portroe Tipp (061) 35 55 34  
 Tony, 43 Richmond pk Corbally Limk (061) 41 53 35  
 Tony, Ballyhannon Quin (065) 2 14 41  
**Meany** Barbara & Des Henn,  
 82 Silverbrook Corbally Limk (065) 2 59 52  
 David, Brackvone Bruff Limk (061) 22 96 35  
 John J, St Conlons rd Nenagh (062) 5 32 53  
 John Jos, 7 St Marys tce Farranshone Limk (061) 41 86 17  
 Laurence, Dreenagh E Ballyheigue (062) 4 77 38  
 Thos, Rosstemple Croom Kilmallock (061) 31 47 72  
 Dr M D Thos,  
 18 Rosehill O'Callaghan Strand Limk (067) 2 62 05  
 Tom & Helen, 20 Bellevue ct Fr Russell rd Limk (063) 8 93 77  
**Meape** Tom & Noreen,  
 Bishopscourt Ballyduff Tralee (065) 8 13 30  
**Mearys** K, 65 Westfields Clare rd Ennis (061) 41 76 47  
**Medard** Geo, Lr Keelnabrack Glenbeigh (067) 2 34 17  
**Mee** Allan, Ballyorgan Kilfinane (061) 41 36 20  
 B A, 42 Oaklawns Castletroy Limk (067) 2 60 25  
 Catherine, Ennis rd Kildysart (067) 3 32 24  
**Mee** Eamon, Rannagh Liscannor Clare (062) 4 76 33  
**Mee** Francis, Kilfenora rd Lidoonvarna (065) 7 11 85  
 Frank, Ballymakea Mullagh Ennis (065) 2 20 25  
 Mgt, Carhudduff Miltown Malbay (067) 2 34 92  
 MI, Corraun hse The Crescent Limk (067) 2 61 23  
 Thos, Churchtown Newcastle West (061) 45 28 79  
 Thos C, Kildysart rd Ennis (062) 5 19 02  
**Meegan** Sean, 33 Plassey gro Castletroy (062) 3 34 34  
**Meehan** Alphonsus,  
 24 O'Callaghan ave Kileely (067) 3 27 26  
 Anthony, 146 Lynwood pk Limk (062) 6 12 71  
 A T, 23 Castletawn Tulla rd Ennis (067) 3 14 28  
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 B, Circular rd Ennistymon (067) 2 12 87  
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 Bridie, Holycross Rathkeale Limk (062) 4 75 25  
 C J, Caherass Croom (062) 3 35 60  
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 Danl, Ballyneale Stud Ballingarry (061) 32 79 45  
 Danl, Kilmorna Listowel (061) 36 91 81  
 David, 9 Hermitage Ennis (061) 37 84 26  
 David, Ballyallinan South Rathkeale Limk (065) 3 02 34  
 Denis, Ballymacahill Ennis (065) 3 79 37  
 Denis, O'Rahilly st Nenagh (065) 3 22 23  
 D J, Lisduff Newmarket-on-Fergus (065) 3 49 22  
 Eddie, Lerrig Ardfer (061) 45 15 18  
 Frank, 15 Caragh ave Limerick (061) 36 30 56  
 Frank, Rahaline Newmarket-On-Fergus (065) 3 78 96  
 Garry, 3 Ballygologue pk Listowel (065) 2 56 00  
 Geraldine, 27 Ashgrove Ballyvelly Tralee (061) 30 23 69  
 Gerard, Helanderry Old Kildimo (061) 45 13 75  
 Gerard, Kilecoleman E Rathkeale (061) 41 46 63  
 Gerard J, 14 Monaleen pk Castletroy (065) 2 91 39  
 Gerry, 49 Stoneyhurst Dooradoyle Limk (061) 37 84 26  
 J, Caragh Kilrush (065) 3 02 34

(061) 45 23 19  
 (065) 3 41 18  
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 (061) 45 10 15  
 (061) 36 84 96  
 (068) 2 23 07  
 (066) 2 98 56  
 (061) 39 43 90  
 (069) 6 46 24  
 (061) 33 41 60  
 (061) 30 19 56  
 (065) 5 16 51





may hope to aspire more to the levels achieved by the Dutch PTT and BT directories in its design. The present changes may be the first step to achieving this. However, with the absence of input from professional designers with experience and with the over-reliance of layout, typeface and typography from other countries directories, the Irish directory will always lag behind.



The input of professional designers in the area of telephone directory design proved extremely advantageous to the functionality of the telephone directory, resulting in a considerable rise in legibility and consultability by the simple act of analysis on the part of the designer. This was displayed by the current BT directory and to a greater extent by the Dutch directory, through the input of Colin Banks, Wim Crouwel. After analysis of the interior page design layout of the Dutch, British and Irish directories a number of significant typographic design elements were revealed. The position of numbers before names, omission of punctuation and use of non capitals by the Dutch and dropped repeat surnames by the British and Irish Directories contributed to improved vertical reading, search for information and consultability.

In the field of typeface design for the telephone directory it was revealed that directories have benefited from a font specific to its needs. Off-the-shelf fonts, such as *Helvetica* and *Univers*, aspire to meet requirements of continuous text legibility and were ultimately dropped or adapted for a specifically designed typefaces such as, *Bell Centennial*, *Phonebook* and *Telefont*. The examination of typeface design specifically for telephone directories showed cultural properties, legibility principles and the necessity for a typeface for each directories' individual needs. This was best shown by *Galfra*, *Nordica*, *Tramantane*, and *Latina* which





have encapsulated all of the aforementioned characteristics of a telephone directory typeface. Although advancements in printing technology in the late '70s originally influenced the development of typefaces for telephone directories, as was the case with *Bell Centennial*, *Phonebook* and *Telefont*, today legibility with space saving and cultural considerations are the main motives for telephone directory typeface design.

If I were to embark on a redesign of a telephone directory, I would recommend as a typeface the use of *Nordica*, as, it displays the cultural properties suited to Anglo-Saxon cultures and can achieve the greater conservation of space, while retaining legibility, which is very much a requirement of a telephone directory. In order to reduce line width and allow vital information to be placed together, I would propose the number appearing in bold, on the left, before the surname, with a column of natural space between these components. I think, dropping repeat surnames, in bold caps, works to improve the search for information, while also reducing line width, so, would be a valid design element in any directory and one which I would strongly recommend.

The address I would place beneath the surname, in a light-weight, on a turnover line, without an indent and alphabetised where there is a string of the same christian name. In my opinion, the christian name should consistently appear in full, rather than combined with abbreviations. Ideally, I think, non-capitals and no punctuation should



be the norm for telephone directories, the only exception, would be when they work as a differentiation between information and not included as a proper English requirement. These recommendations would allow for complete vertical reading of the information, as it is afterall, not continuous text but a list.

With the existence of a number of area codes, appearing along side telephone numbers, (as is the case with Irish directories rurally) I would eliminate the digits which are common to all area code numbers, for example (06), and have a varying treatment by using a light or medium weight typeface to that of the telephone number.

The principles of telephone directory design vary greatly from those of continuous text. Where the principles for design in telephone directories were fully realised, a greater proficiency in legibility occurred as was best displayed in the Dutch directory. Perhaps, in the future with the involvement of ITT through Golden Pages in the Irish telephone directory, a layout will be acquired equal in typographic consideration and typeface to its mentors.

After completing this thesis and studying of Telephone directories, I feel, that a graphic design student could learn much about nitty, gritty typography by examining telephone directory or other informational typography design. Just like we all know how to tie a bow in our shoes, when we teach a child to do so we become aware of the complex, mechanical wonder of a simple, boring task.





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