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# The One Per Desk a revolutionary product



IN OCTOBER, 1983, a new ICL Business Centre was formed at Bracknell O1

Called the OPD Business Centre, it has been working in great secrecy and behind closed doors, under Manager Andy Roberts (left).

The result of its work is a new and exciting product for ICL - the

It was developed after extensive market research to find out what the business professional needed and combines computing and telephone facilities in a way never done before. ICL Managing Director Peter Bonfield said: "We've done our

research, committed our capital and come up with a revolutionary product. We have the capacity to produce up to 100,000 OPDs a year and we believe the timing is right.

"ICL is not suffering from the British urge to 'wait and see what happens'. The market is there to be opened up, we have the first genuine OPD machine and we're going to exploit this advantage in a determined, marketing-led way.

"Our job is to turn its international potential into worldwide sales."

This 4-page Special tells the story of the product — and shows why it is already a world leader in its field.

A NEW ERA in the computer revolution has come with the launch of ICL's newest product. Called the One Per Desk it combines an advanced telephone with a microcomputer - and has been designed so people who can't even type, let alone use a computer, can use it.

It plugs straight into a 13-amp socket and uses an ordinary telephone line.

The November 15 UK launch will be followed with launches in Europe, Australia, New Zealand, Hong Kong, South Africa, Canada and the US.

The target audience are all those managers and professionals — working alone or in large organisations — who haven't got the time, or the inclination, to get to grips with computer jargon and computer codes.

In the UK alone the potential market is over 3 MILLION desks — nearly £4 BILLION. It is a real plug in and go machine — users

don't even need to read an instruction manual to start using it in their working day. From the moment they switch on the OPD

- An advanced feature phone Word processor Business graphics Financial and other spreadsheets

- Database management Telex facilities
- Access to any communications network running on Videotex, glass teletype, or ICL Link that's more than 1,000 computer information services worldwide including household names like Prestel and Dow Jones.
- Electronic mail facilities A sophisticated calculator
- ☐ A voice synthesiser to leave recorded messages
- Advanced messaging facilities
- ☐ Communication with any other OPD inside, or outside, their own

Prices start from under £1,200. And all buyers get a one-year USERCOVER to give peace of mind particularly to businessmen and women who are concerned about stories about teething problems with new technology products.

It's amazing ease of use has been tested and retested with the layman in mind.

Yet it also includes specially developed database and BASIC programme languages so experts can write programmes for specialised tasks.

Other major features include:

## **MULTI-TASKING**

It can do many jobs all at once (see More Good news for OPD users — Page 4).

## WIDE USE OF MENU SELECTION

This is one of the keys to its ease of use as the user is given simple choices on the monitor screen so he can get on with the job right

## WIDE USE OF PROMPTS

These appear at the top of the screen and allow users to do more advanced things when they are ready.

## A HELP CARTRIDGE

This is used when the user wants quick advice, particularly when doing something

## A NOTICEBOARD

This is on the bottom of the screen. It in-

cludes information such as the date and time, tells the user when information is coming into another part of the OPD, and so on. It also gives the cost of phone or database calls they're being made.

## MESSAGING

This allows the user to plan his day. He has a computer In Tray where incoming messages are stored until he is ready to read them, a Notepad where he writes his own messages, his diary or business reminders, and an Outtray where messages he has sent are stored. Messages can be quickly sent between OPDs - and when one is received the noticeboard informs the user, but without interrupting what he is doing.

OPD's telephone can be as simple or as comprehensive as you like. It can have one line or two - in which case the user can make a call on one line and receive information from a database on the other while he or she is

For an ordinary call the user just picks up the receiver and dials the number automatically comes up on the bottom of the screen.

The OPD phone also gives:

A personal telephone directory - with up to 500 numbers with names, addresses, occupations, extension numbers and anything else the user wants to type in - birthdays, information about the last time they rang, background notes on the company and so on. New entries are automatically arranged in alphabetical order.

A personal directory enquiry service - it will find any number in the personal directory. Users simply type in the person's name, or company, or other information and the OPD automatically searches for it and puts the number on the screen — along with other information typed in the directory.

Shortcode dialling — Users can give names in their directory shortcodes — say the person's initials or the initials of the company. From then on the user can use those initials to dial the full number. If there's an extension it will automatically appear on the screen.

Call timing and charging — the amount the call is costing appears at the bottom of the screen as it's being made. The OPD can also keep records of the costs of the calls made.

A loudspeaker - This allows users to leave the receiver down and carry on doing something else when someone is talking to them. It is also there so numbers can be dialled without the receiver being picked up - the OPD indicates when the call has been answered and the handset is lifted to engage a conversation.

Recorded messages - this is made possible by the OPD's voice synthesiser — complete with its own vocabulary. Up to 16 commonly-used messages can be stored in memory. Up to two messages can be left to come on or go off during the day at set times

— allowing the user to change the message even when he or she is out of the office.

Other features normally associated with advanced telephony are also available including recall of any of the last six numbers

dialled by pressing only one key; the ability to hold calls, transfer them and set up teleconferences.

 The telephone directory, enquiry service, shortcode dialling and display of how much calls are costing are also provided for Computer Services — saving time and money on database calls. All data received can be stored and printed off-line.

AND MUCH. **MUCH MORE** See page 4

JUNE THE 28th, 1983, is a date which will go down in the history of ICL.

It was the day when a dream to give every businessman the chance to

really take advantage of high technology began to come

It was on that date that the main Board of ICL gave the 'all systems go' order to a project which has now brought to the world the One Per Desk.

Roberts Manager Andy Roberts recently looked up the report the Board received from his

At that time the OPD was

one to see.

"The major issue was then to turn the concept into reality and construct the team to bring the product to market," he an idea... a concept. But the potential was there for every-

"The creation of a Task Force and subsequently the Business Centre became the focus for driving all aspects of

the business forward."

The product had to be a ow-cost, high-volume mach-

ogether

several suppliers, including eas of ICL, STC and Thorn-

Ally through another that washes ally through another than onitors: There is a station that embles and tests OPD monitors

or screen, and the station, the sphony module is made and its sphony module is made and its mmunication capabilities tested as a special piece of equipment has an artificial 'ear' and the sam artificial 'ear' and

until .

and checked at the OPD utfacturing site.

M: The OPD's basic software is middled on a board known as the MPack, (ROM means Read On-

mand for OPD, ICL has invested in a new high-volume, high efficiency facili-ty occupying 17,000-square feet of ICL's LET 05 factory in Herifordshire. With all the necessive equipment in-stalled and running, the plant can pro-duce 100,000 units a year.

under Jondon ulina 3 year.

Producing this quantity of OPDs, to quality standards, has ment using advanced, high performance manufacture. A defeated group of specialists in high volume manufacture has been recruited. Work on the OPD part of the LET 05 factory began in October 1983, and the centigrade twice during the cycle.
After the soak test, OPDs are
rutomatically off-loaded onto a
olling system, called a traveller,
where they are subject to final ary deat of insestment has any deat of insestment has about the certosiste and and when the CPD is committed goes a soak seat, established before the counciled lifting geat is cloud CPDs over a 24-hour one time. Over a 24-hour every OPD goes through the effection of 50 degrees and turn elevation of 50 degrees.

an instruction manual.

"It had to be incredibly easy to use — but it had to be incredibly useful too." A lot of work was done to find out the needs of the market. And this led to some special tool he could use in his every day life. Without train-ing. And without even reading was balancing what they wanted it to do with how much it would cost. They drew on all the strengths that ICL could ine - and one of the areas the team had to watch carefully

not only in terms of develop-ment but also in distribution as a high volume product needs the support of major

cooperation with others

crucial decisions early on. For example, a plan for the OPD to have a calculator-type keyboard was discarded in muster to hit the target.

By June, 1983, the tream had decided certain key criteria. The product, they decided, The to be not only useful to people with no computer knowledge but also had to have graphics, a data base, a telephone facilities, a colou

Another major need iden-tified back in 1983, of course, was for the product to be fully integrated — it should be able

style keyboard — at an extra cost of only thirty bob! If ever there was a project which has shown the value of One Per Desk is it. Andy Roberts and the OPD

favour of a full typewriter

switch from one job to

another quickly and easily.

teamwork and the ICL Way,

Telecommunications set-ups world-wide are now involved in the run-up to launch in other countries and con-

distributors.

Public Telephone and

Ithad to talk to systems like Prestel and Quikcomm, link with ICL and other main-lrames.

Psion, who were bing just such a soft-ackage — Xchange. On the software side this led

ware package — Xchange. It has been adapted to meet the special needs of the OPD and gives the product its word

team to the software

If had to have messaging and be able to be programmed for specialised tasks.

It needed word processing, database management and spreadsheet facilities.

team have heaped praise, too, on the Procurement Division at Kidegrove. "Their contribution to the project has been immense," said Andy.

The whole exercise was presented by planned with Phase exercise was presented by planned with Phase server the programment of the planned with Phase servers.

Reviews used to make sure targets were met and that each team knew what it had to do -Development Manager John Panter recalls how they began by recognising there is one wire you almost always find on anyone's desk — the

Meanwhile, as all these separate parts of the OPD were coming together ICL's

Quality team were working hand-in-hand on the develop-ment and design as it came

processing, graphics, spread-sheet and database manage-ment facilities.

telephone wire.
"What we were looking at was how to use that fact to br-ing the businessman a very

up those teams which has brought about the OPD.

individuals in ICL who made

But it was not only the many





ample. Their offices at Bracknell Wayne Parkin and Develop-ment's John Panter are a clear In fact, they were part of the but an integral part of original team - there to make Quality not an afterthought

are separated by a screen only five foot high — and three in-

tion and talking to the other I
can't remember," said Andy
Roberts. "That's what you
call real team working —
development taking place to "The number of times I've seen one leaning on the parti Centre numbers around 50, working behind locked doors at Bracknell. Yet, it is as closely-knit as er - Marketing Manager Now the OPD Business

are brought in to keep the OPD ahead of the field they will be just as suited to market And as more developments suit the market.

have been the start of a dream the OPD Jaunoto no November 15 marked the beginning of a new and exciting era for ICL. "OPD is the world leader— and we're going to keep it that way," said Wayne Parkin. For while June the 28th may

# Goods Inwards: This uses the bar coded labels. Barders of parts requiring and labels. Barders of parts requiring anti-static plastic 'bins' and then stored in enormous racks, each section of the racking having its own bar code label. The two labels are read together and go All geared up for 100,000 units a year the system so parts can be instantly The entire operation is computerised. When parts, with the base code labels ICL and issuppliers use, enter the are, they are tasked by a System 25 — the first piece of equipment the team brought in. It runs the SAFES factory management software package. This runs operations within the

area is virtually unrecognisable now.

The roof has been replaced, new Versings put in, new walls built, anti-static a material laid across the floor area and a a material laid across the floor area and a care loading by constructed. A special pearboard box compressor avoids the Liusual 'litter' of boxes used for parts is sugal 'litter' of boxes used for parts.

manufacturing process, a faulty item is discovered, it is booked into the system, again by reading the bar code labels. The faulty part is replaced from the stores and the removed one continues around the rework loop until it is tested successfully, it is then returned to the stores.

FOR ICL the development of the One Per Desk was a

"We were doing some-thing totally alien to ICL," said Development Manager

John Panter.
"We had never been involved in telephony at this level — never been involved in a low cost, high volume product. It was all new." For the OPD development

team it meant designing to cost rather than just produc-ing a product that worked for the people who would

It was a planned and pro-grammed development — but the team were told to

new needs coming from market research and to take account of the in-put from the Quality people and so orget normal constraints.
This allowed the OPD to evolve as development took place -- for example to meet

But two major tasks never

Second, the User Inter-face — it needed to be designed so it took away the mystery of computers for people who had never used First, the System - it needed to be capable of doing more than one thing at once, which is called multi-

one before.

While those two issues stayed constant there were important changes of direction during the product's

One was the decision to use a typewriter style ceyboard instead of one bas ed on calculator-type key boards. "From that momen

THE WHOLE philosophy

iality—in from Day One

from design through to pro-duction of the One Per Desk was to get it right — first That was why the Quality team headed by Quality Manager Mike Darnell was in-

"You can't put quality in at the end — you have to build it in

right through the process," he said. Soak test

tinual evaluation through each stage of development with strenuous quality control applied to every part of the OPD—the connectors, mechanically

practice this meant con

active parts, components such relays, switches and so on. Some 200 screens/power

units were on soak test for more than six months and the finished product has been successful. If tested continually for thremonths — in all kinds of conditions, at high temperatures and

at the same time, "said Chris.

The whole Quality programme was a massive task involving many people both inside and outside the Business process has been audited to en-

it has developed.

On the software side, a team under Acceptance Test Manager Chris Cussens looked at each part of the software as it

people in Procurement at Kid-sgrove and Manchester, in Quality at Letchworth and many others who have also made a major contribution. "Our job in Bracknell was to coordinate this work — for in Centre.
Mike Darnell said: "A lot of the credit should go to the many people in Procurement at Kiddevelopment and testing was on a much greater level with the OPD than probably anything done previously within ICL," he said. was developed.

the final analysis quality is the responsibility of each manager. first batch of software

"We have already set

mechanisms to make sure we get feedback from the market on Quality. That means we will be able to maintain the high stan-

there from Day One it is abdards we have set.

manufacturing process, including Stock Control, Work in Progress, Purchase Order Control, Sales Order Control and financial control, which also gives a complete management information Lands of company to the first installation of equipment began and on the first day of CL's Organising for Growth conference in July, the first Printed Circuit Board was soldered on the line. In early November, the team had

everything in place to begin the ramp-up for the volume production targets.

The basic package has been tailored in

Rework Control: If, at any stage of the

testable code was given to the team in March and Aprill—it was the software running the OPD's voice response.

As other parts of the package came through, they were tested came through, they were tested to only in four own right.—but also to make sure they were compactible with all other parts of the package. "Because the OPD is a multi-tasking system a lot of the testing was concerned with its of the OPD. The development and manuf-facture of the OPD has been done in line with Ministry of Defence 0521 quality standards

— recognised worldwide for their thoroughness — and the There was evaluation to en-sure the various devices were compatible and, on the soft-ware side, to make sure the Because of its telephone facilities, the OPD has gone through rigorous procedures set by the British Approval duct to go through that process and one of the first complex products BABT has assessed— all OPDs sold in the UK will bear the familiar 'green spot' but also super easy to use.

The collaborations involved close cooperation on Quality, tions industry now person.
Telecom is being privatised.
The OPD is the first ICL pro-(BABT) — a new body set up to regulate the telecommunicaby the British Approva Board for Telecommunications

## Multi-tasking

All we can do is try to create the

"For while Quality has been solutely essential to keep it there throughout the product life and as new developments and ap-

# **Inique challenge o**

on," said John Panter, "the processor was best for the COAD's value improved 'n' job." Another change was the prababatoment of plans to in-Procoporate a Sinclair flat K screen in the design—the in screen monitor in the finish—red product allows colour as P

Sinclair designs — one looks after the screen and the other

controls the Microdrive and interfaces such as the

printer. The ICL contribution was

unique because we de-veloped the third chip to make the all-important

elephony interfaces work.

Major successes in the project were the work of Procurement Division in Kidsgrove and Manchester in buying in all the parts needed and the way the ICL. Publications Centre at Bracknell produced the OpD manuals. There was also success in the collaborations with others. For example, two of the three custom produced electronic components (chips) for the OPD were microcomputers in the system — originally to be the one used in the Sinclair Spectrum. It was agreed with Sinclair that the 68008 32-bit Yet another was the

Another major technological exhibition to PDYs ability to use the relephone line interface circuit. In other words, to link the computer side of the operation with the telephone "A key issue was ease of use," said John Panter.
"The criteria right at the beginning was to get away totally from computer synuse of menu selection —
each leading progressively to
the next set of choices of action for the user. nother issue was that guidance to the user had ein the ROM memory in-

and access functions.

When John was how all the issues were solved, he replied: "By a lot of hard work by a lot of talented people." le the machine — so it uld never be lost whatever ppened: power cuts in-

salesman's product - they can demonstrate it themselves and every one of ICL's UK sales force will be shown its full capabilities by Christmas.

OPD Marketing Manager Wayne Parkin and his team at Bracknell are convinced that once demonstrated the OPD will be hard to resist.

"One of the main problems we think we will have is convincing people the OPD really is as easy to use as we say it is," he said.

"The one way to prove the point is by demonstrations and this will be a major part of our marketing not only in the UK but also worldwide.

"This is of major importance given the exagerrated claims that have been made in the industry for office products in the past and our need to show how different the OPD is from competitive products."

A whole list of marketing initiatives has been planned.

These began with three separate Press Conferences in London on November 15 and 16 - aimed at all sections of the Press, Radio and Television, national press and

discs.

in another.

processor.

QUILL.

grammes do.

**ABACUS** 

sure people who have never used

computers can use it - from the

moment the OPD is switched on.

Word Processing —

the package is called

Even two-finger typists can use

the OPD as a word processor right

away. QUILL has a wide range of

editing facilities, allowing words to

be put in or taken out quickly and

easily and full search facilities to

A major plus point is that you get

what you see - the screen always

shows exactly what will be printed.

For example, if you want text in

bold or underlined you don't use

confusing symbols as other pro-

to design page layouts, tabulate

figures or sections of words, type

Other features include the ability

find words that need altering.

# ly the OPD is hard to resist

## ...and how it's to be marketed around the world

specialised press in areas such as accountancy, management, marketing and so on. Press Advertising will also be widespread.

As well as all ICL salesmen being provided with OPDs every ICL reception area will also have one.

There will be major use of Computerpoint Demonstration Centres and of Management Centres.

In the UK, launches to customers will be held on a regional basis in the week beginning November 26. Special customer events will be set up in Bristol, Manchester, London, Glasgow, Birmingham, Bath and Windsor to make a big impact.

As the product hits the market the OPD marketing team will put into effect a major communications programme to receive feed back. As this comes in they will be able to gauge the effect of the marketing operation and by being flexible change direction to suit

In the same way, any new requirements of the market, for example in the area of new software applications, will also be quickly identified.

The Business Centre has drawn up a two-year development plan for the OPD.

"We have the market lead and this plan will make sure we keep that lead and position ICL as the leading supplier of executive work tions," said Wayne.

The Business Centre has already had discussions with leading software houses who will be working on new applications for the OPD.

The first non-UK launch is set for Australia and other major, potential growth areas are Europe and North America.

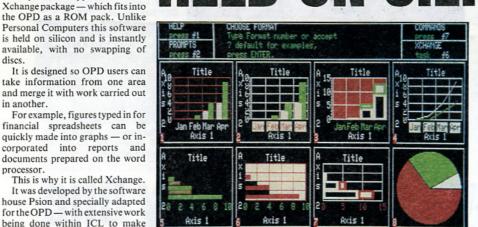
Because of the telephone facilities on the OPD the product will need to meet the telecommunication standards of every country where it is launched.

Overseas, Public Telephone and Telecommunications authorities (PTTs) are already in discussion with ICL.

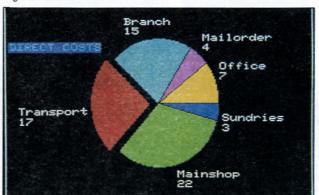
In all cases the distributors around the world must have three things, said Wayne. They must have the infrastructure to support a product like the OPD in terms of sales resources and organisation; they must have expertise in telephony; and they must be able to make a contribution in helping to get the product approved.

In some countries the different telephone standards will require some technical modifications to the OPD - and these are already well in hand.

## IUR STAR SOFTWARE IS HELD ON SILICON puter software packages available with the OPD - each of them leaders in their own right. They are supplied as the



Take your pick with the OPD — eight graph shapes are automatically produced on screen from figures fed in by users. They choose the one they want and can then change it to suit their own needs — see EASEL



anyone in finance, Government or who deals in statistics.

Unlike other spreadsheet programmes the user types in the actual words of what he is doing not complicated cell-referencing codes. For example, if the figures are about Sales he types in SALES. If the month is January he types in January (or Jan).

The OPD allows up to 64 columns horizontally and 255 vertically.

Text can be added as necessary other features include automatic recalculation of whole rows or columns of figures and the ability to show two parts of the spreadsheet together on the same screen (called windowing).

## Database management - ARCHIVE

Users without previous experience can set up and run powerful card-index type database filing systems within minutes of switching on - with information on each entry to suit the individual: names, addresses, potential business and so on.

Those with experience can use the programme language (based on BASIC) to develop specialised database management programs such as accounting and stock control.

In either case, the system allows automatic search of the information - for example, in the case of a file on Customers it could extract a list of all customers living in, say, London or Sydney who have made a purchase in the last month.

Its outstanding ease-of-use is supported by other major plus points including the ability to use any number of files at one time, cross referencing and powerful indexing facilities.

## Graphics — EASEL

Sets of figures typed onto the screen are reproduced automatically on the screen in graph form - and the user is given eight different shapes to choose from.

These include vertical or horizontal bars, pie charts, line graphs and so on.

Different graphics can be merged, text can be moved around, lines made wider or narrower, colours changed and so on to allow graphs to be designed to individual needs.

Segments of pie charts can be pulled out for emphasis and graphs automatically produced from information already put into the Spreadsheet programme.

## More good news for **OPD** users

ONE OF the many unique features of the OPD is that it keeps a running record of what the user is doing.

This feature has been included in the design because the OPD is able to handle many jobs - all at once.

Users, for example, may be doing some word processing, switch to a database to get some important information, send off a message, receive or make a phone call and forget how far they had got with the word processing.

No problem on the OPD. They simply press a key to be given a list of which jobs are still outstanding and how far they have got with them.

They can then select the one they want to carry on

"It is a facility we included because every businessman and woman knows about interruptions," said Business Centre Manager Andy Roberts.

"With One Per Desk they can quickly get back to what they were doing before being interrupted by that phone call or unexpected meet-ing."

In addition, OPD users can do other jobs while the OPD is working for them. For example, they may have asked for information from a database and while waiting for it to come through can use the screen to work on a report and have documents printed out. The OPD can cope with as many jobs like this as the user needs - all at

## words or numbers above or below the line and so on. Spreadsheets —

The ABACUS programme is a business tool of enormous help to