



BeeRaider Press Kit



DECEMBER 23, 2014

BEERAIDER LIMITED

Rosferrard House, Beaulieu, Drogheda, County Louth, Ireland

www.BeeRaider.com

BeeRaider Press Kit

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1. Letter of Introduction

Dear Reader

It is my pleasure with this brief press kit to provide you with an introduction to BeeRaider.

BeeRaider was established with a view to exploiting the potential of its radical new computer keyboard design called the *Radial Keyboard*. Our keyboard has been designed to address the shortcomings of the existing standard QWERTY design. It facilitates the majority of users, who are those untrained users wishing to improve their keyboarding skills and productivity by offering them the means by which they can greatly increase their data-entry speed and efficiency.

With this press kit I'm excited to be able to share the passion and enthusiasm we have for this unique keyboard product design. I am available for follow-up interviews and questions and can be reached using my contact details included below.

Thank you for your time and interest.

Best regards!

Ray McEnaney
Managing Director

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2. About BeeRaider

BeeRaider is an Irish based company delivering quality innovative keyboard products for the purpose of efficient data-entry. We chose to develop a radically new keyboard design because we felt that the time was right to challenge the dominance of the QWERTY keyboard standard, which previously originated as a late 19th century design for mechanical typewriters.

The advent of a new era in portable computing devices has further exposed the inherent weaknesses of the QWERTY design and we believe that the time is now right for an alternative solution. Our new logical, ergonomic and efficient Radial keyboard design is aimed at providing that first real alternative to the inefficient QWERTY design.

3. Product Information

3.1 Customer Value Proposition

Our optimised Radial Keyboard design is primarily aimed at the untrained computer keyboard user, which would be the vast majority of keyboard users today. Its logical, ergonomic and efficient design offers these users the means by which they can greatly improve their typing speed and efficiency over a relatively short period of time. If they further apply themselves, we believe it will also facilitate them in becoming their own self-taught touch-typist. This would mean that they would no longer need to look at the keyboard when typing.

The Radial Keyboard Design has been designed as a 21st century computer keyboard with none of the shortcomings of the QWERTY standard keyboard design, a design that was contrived for use with the mechanical typewriters of the late 19th century. The Radial Keyboard design is about simplifying the future of data-entry.

3.2 Unique Selling Points (USPs)

1. It has a logical more efficient ergonomic layout with a familiar user-friendly bee outline that anyone can readily relate to
2. It can be conveniently operated using one or both hands, while its smaller footprint greatly facilitates those untrained users who like to type in a hunt and peck fashion with only one, two, or more fingers
3. It comes with a choice of two main keyboard layouts: a) QWERTY layout or b) Optimised alpha-character layout based on each character's frequency of occurrence in the English language. The Optimised layout will greatly facilitate untrained users aiming to achieve faster typing speeds
4. Testing shows that the optimised keyboard's alpha-character layout can be easily memorised in as little as 10 to 20 minutes. Becoming a touch-typist on the new keyboard is a possibility for everyone. Remember, most untrained users even after years of using QWERTY, still don't know where the alpha-keys are located and must look at the keyboard in order to find them when typing
5. It provides much bigger keys for the weaker less agile fingers and this aspect of the design will facilitate improvement in a user's typing accuracy
6. It solves the problem of small cramped keys on devices such as Netbooks and Laptops
7. Its small portable size/footprint still maintains acceptable keycap size for its smallest keys. This much-reduced footprint size will yield savings in a) production, b) storage, c) shipping costs and not forgetting d) desk-top space
8. It looks great
9. It may reduce the possibility of RSI (Repetitive Strain Injury) developing.

3.3 Images and Videos

3.3.1 Miscellaneous Images



Our Logo-1



Our Logo-2



Our Website (www.BeeRaider.com)



Our Banner-stand for Android App



Our Booth (#75339) for CES International January 2015

3.3.2 Our Android Touchscreen App



Our Android App - QWERTY Radial Keyboard layout



Our Android App – Optimised/Efficient Radial Keyboard layout

Note: Other language layouts supported include: a) Spanish, b) French, c) Italian and d) German.

3.3.3 Our New Wireless Desktop PC Keyboard



Our New Desktop PC Wireless Keyboard & Mouse Combo - available in QWERTY or Efficient/Optimized Layouts



Our QWERTY Layout Keyboard



Includes Slider Switch to Select QWERTY or Efficient/Optimised Layout (Prototype)

3.3.4 BeeRaider Videos

<https://www.youtube.com/watch?v=YJntfIGSeLM&feature=youtu.be>

Design Video


<https://www.youtube.com/watch?v=douhAbs21wk>

Demo Video (App)

<https://www.youtube.com/watch?v=yIDsvAIIKq>

Promotional Video

3.7 Brochures and flyers




** Logical * Ergonomic*

** Efficient * Compact*


The Home of 21st Century Keyboard data-entry

BeeRaider Keyboards

BeeRaider currently supplies three main products, all based on our unique and patented Radial Keyboard Design. A design created for data-entry efficiency in the 21st century.



QWERTY Desktop Radial Keyboard



Scalable


The Radial Keyboard Design is readily scalable and is particularly suited for use with portable devices such as laptops and netbooks. It could for example scale to the size of a small wrist-worn Bluetooth Keyboard that could pair with devices such as Google Glass.

Compact

The Radial Keyboard Design is about 1/3rd smaller than the standard QWERTY Keyboard area. This reduces finger travel time thereby facilitating an increase in data-entry typing speed.

Larger Keys for Weaker Fingers

This feature encourages a user to use their less agile fingers, thus allowing them to move away from the considerably slower 'Hunt and Peck' approach that is used by the majority of today's keyboard operators.



Ergonomic

Reduces operator fatigue and discomfort. The operator can naturally position their hands over the Radial Keyboard design with ease. May even reduce the possibility of Repetitive Strain Injury (RSI).

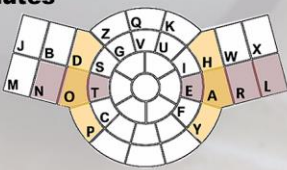
Optimised Desktop Radial Keyboard

Advantages of the QWERTY Keyboard Layout

The Optimised Radial Keyboard includes all the advantages of our QWERTY model but it's also more logical and Efficient to use.

Locate Keys Within 20 Minutes

Following a short 5 minute video-tutorial combined with 4 to 5 minutes of practice exercises, most users can then proceed to memorise the location of the Alphabet-Keys in approximately 10 minutes.



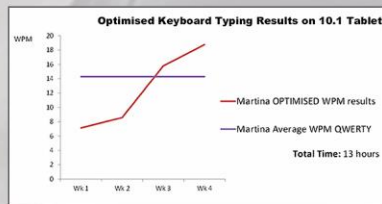
Most Commonly Used Character Keys

The most frequently used alphabet character keys are deliberately arranged in such a way as to be within easy reach of the user's two index fingers. This approach ensures that a user's finger-travel-time is kept to a minimum.

Inducing Finger Muscle Memory

By the use of recommended acronyms and words the rapid recognition of key positions can be quickly achieved. This will increase data-entry speed over time.

Optimised Keyboard Typing Results on 10.1 Tablet




Week	Martina OPTIMISED WPM results	Martina Average WPM QWERTY
Wk. 1	~7	~14
Wk. 2	~8	~14
Wk. 3	~14	~14
Wk. 4	~18	~14


Total Time: 13 hours

After eight hours of typing with the Optimised Radial Keyboard, Martina matched her QWERTY typing speed. Martina has been using a standard QWERTY keyboard for 25 years.

Download App


Our keyboard App can be configured for both the QWERTY and the Optimised Radial Keyboard layouts. It also supports five main languages (English, Spanish, French, German and Italian).






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Our Website



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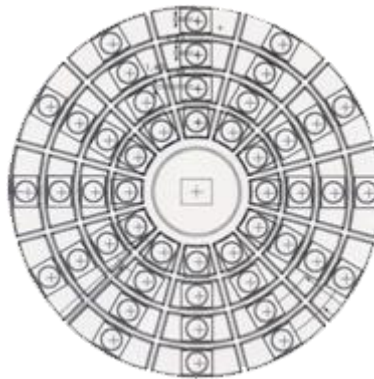
3.4 Design Philosophy

The development and production of the new Radial Keyboard design followed several fundamental guidelines. The aim was to produce a design that would result in:

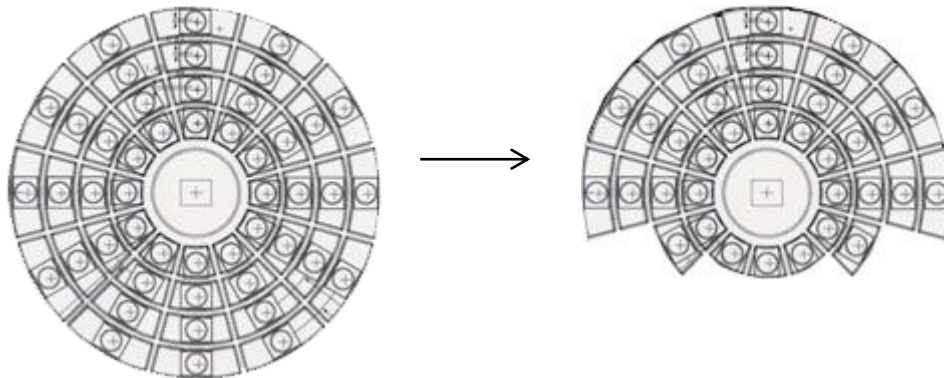
- A keyboard that would be more logical, ergonomic and efficient
- A reduction in user familiarisation-time
- An improvement in a user's data-entry keying-speed
- A reduction in the keyboard's footprint size from that of a full-sized desktop QWERTY keyboard

In first setting out to fulfil the goal of designing the Radial Keyboard it was thought that the best starting point for ensuring minimum finger-travel time was to adopt the circle as the basis for the new design. This was an instinctive choice at the time because it wasn't altogether clear just how it could be made to work.

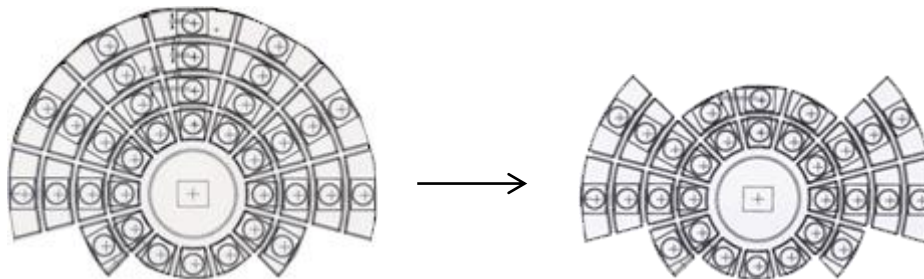
Several concentric circles containing as many keys as required to accommodate the full US QWERTY keyboard (with a few ancillary keys (not shown)) was the result of this first attempt. This layout can be seen in the following graphic.



To begin with, the alpha-characters were arranged in a sequential order starting on the right side and going from A to Z in an anti-clockwise layout. However, following prototype build and testing, this arrangement was found to be far from ideal, as it was too difficult to use in practice mainly because the lower keys prevented ease of access to the upper keys. The second major design attempt shown below, improved the design by removing the lower section of keys as depicted. At this stage, practically all of the keycaps now contained multiple characters.

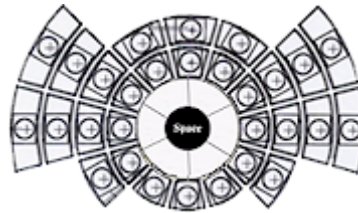


Further design work was carried out with the intention of optimising the alpha-character layout with the third major design attempt. It was decided to get rid of the sequential ordering of the alpha-character keys. It was thought that character-position-layout optimisation was required, and that this would be best based on the character usage frequency in the English language. A pull-out (see graphic below) from the second design attempt containing those keys displaying the alpha-characters was felt to be the way to go. This approach led to a much reduced keyboard size and the resulting consolidation of the keyboard character set into this much smaller footprint proved feasible with some additional keys and adjustments to the design. At this stage, there was now also one large space-key at the centre of the design.

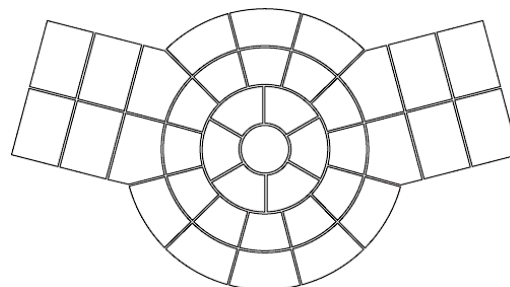


It was also soon noticed how the distinct frontal outline of a bee could be seen in the design. This was rather fortuitous as it helped galvanise so many aspects of the design project and the subsequent design effort that was to produce the final Radial Keyboard design. The Radial name comes from the fact that the keys of the design emanate from the centre in a radial pattern. A radial pattern is one that appears to radiate from a point, like the spokes from the hub of a wheel. If preferred, instead of a wheel, one can also draw an analogy with the analogue clock. Another outcome from this observation was the company's BeeRaider name.

Efforts were now concentrated on developing and producing a design using this shape that would incorporate the necessary full-key complement of the desktop US English QWERTY keyboard. This was realised with a few additional keys (not shown). The main change at this point occurred with the decision to consolidate all the main modifier keys in the central (control) hub-area of the design, around a smaller diameter space key. This can be seen in the following graphic.



The next major design change was concentrated on the angle of the wings. Note that a bee has two sets of wings. Prototype testing showed that the angle of the keyboard's wings at this time was considered to be less than ergonomic and resulted in a somewhat cramped typing style. After further design adjustments involving multiple attempts, the final transformation of the angle of the wings resulted in the following version of the Radial keyboard.

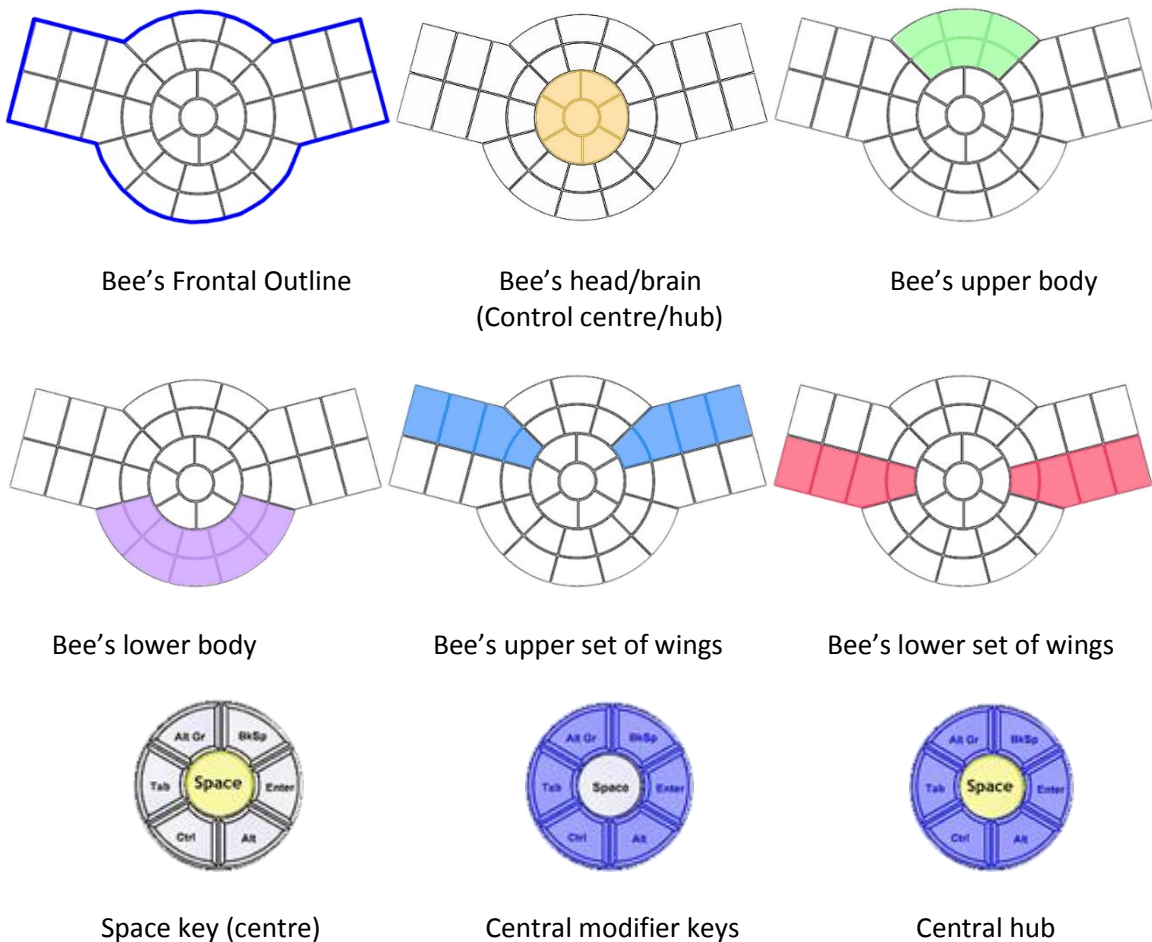


At this point, the design was nearing completion but one further design change was required before this could be realised. This involved the introduction of two further shift keys to allow for key-cap character consolidation. It was decided that these two new shift keys would be sticky in operation, which meant that they would be active (without holding) immediately after being depressed and would remain so, until a valid paired key was activated along with it. This feature is intended to improve user-typing speed. The three shift keys were later moved to bottom-centre of the keyboard layout, where a user's thumbs could be used to easily operate them. Their operation is fully explained on the 'Support' webpage, where the discussion concentrates mostly on the operation of BeeRaider's Android touchscreen keyboard App.

3.5 Features of the Radial Keyboard Design

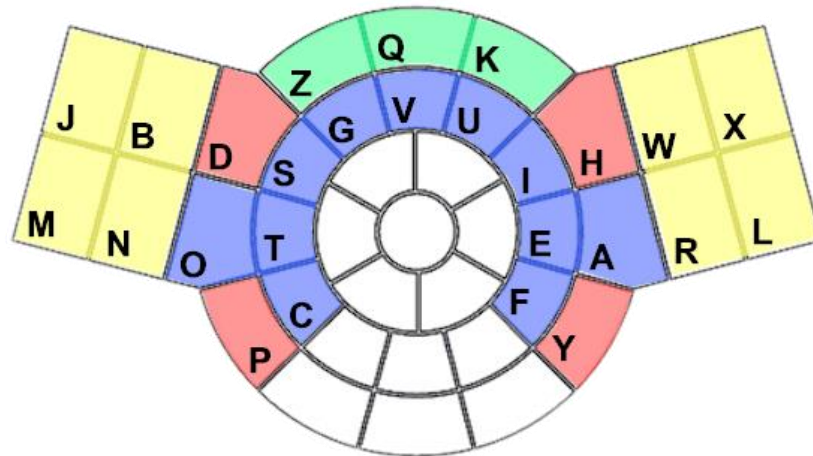
The intention here is to familiarise the user with the various Radial Keyboard design aspects so that they might more easily understand and adapt to using the new keyboard. The ‘Support’ webpage contains more specific information on how best to use the new design, both in a formal and informal typing-style approach. It’s thought that the bee analogy should also prove popular with children learning to type for the first time.

We have already mentioned how the Radial Keyboard design looks like a bee and now we can look more closely at how the features of the new design relate to the various parts of a bee’s body. The space-key is located at the centre of the keyboard and acts as a kind of reference key whenever a user chooses to type in an informal or freeform typing style (see the ‘Support’ webpage). Arranged around the space-key are the modifier keys. Combined together they form the hub of the keyboard’s key-set arrangement and can be equated to the bee’s brain.



If a user should decide that they want to type in a more formal manner (see the ‘Support’ webpage) then they will need to know that the bee’s lower set of wings contains the eight Home Keys (four each side).

The optimisation of the keyboard layout for the alpha-characters is based on the frequency of occurrence of these alphabet characters in the English language. Their ultimate position however on the Radial Keyboard is also purposely derived to coincide with the dexterity of a user’s fingers. The index finger being the most dexterous one, followed in turn by the middle, ring and little fingers. In general then, the following statements would hold true for the position of the most frequently occurring characters (from most to least) and the finger(s) one might use to type them.



Most frequently used keys to least frequently used keys

(Smallest keys are as large as QWERTY keys, while larger keys cater for less dexterous fingers)

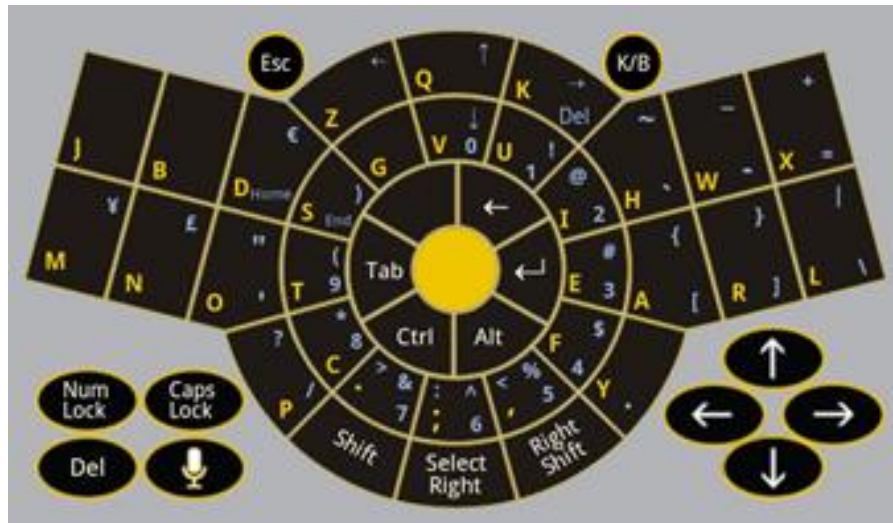
1. The characters located in the area highlighted in blue above are (generally), those characters, which occur most frequently in the English language. This means that when typing a document, a user’s fingers will travel to this area of the keyboard more frequently than other areas of the keyboard. These keys are therefore arranged so that they are closest to a user’s index fingers. Remember, the index fingers are the most dexterous of the digits. This facilitates speed of typing. Notice also that the smallest keys on the Radial Keyboard are equivalent in size to their counterparts on a full-sized desktop keyboard.
2. The next most frequently typed characters are (generally) those shown highlighted in red above. These can be thought of as being positioned on the second concentric circle, which has the central-hub (bee’s brain) at its centre.

3. Likewise, concentric circles can be imagined for the W, R, B, and N keys (3rd concentric circle) and the X, L, M, J keys (4th concentric circle) respectively. Note how these keys are considerably larger than those located on the first concentric circle, as are all other keys. This means that the less dexterous fingers, such as the middle, ring and little fingers, all have bigger key-cap targets to aim for, which should facilitate an improvement in the typing accuracy of these weaker digits.
4. The next most frequently typed characters are (generally) those shown highlighted in yellow above. These can be thought of as being positioned on the third and fourth concentric circles and they also have the central-hub (bee's brain) at their centres.
5. The second concentric circle also contains those keys highlighted in green above, which (generally) represents those characters occurring least frequently in the English language. Being positioned at the top like this, means that finger travel requirements to this area (bee's upper body) will be minimised.
6. The remaining keys located at the bottom of the keyboard layout, consist of the main punctuation marks along with three of the ten numerals and of course the three Shift keys (on the App) which are conveniently placed for operation by the user's thumbs.

3.6 Aids to Learning

One of the reasons why many untrained users employ a hunt and peck approach to typing is because they don't know the layout of the characters on the QWERTY keyboard. This isn't that surprising given its illogical layout. Consider for example, that the characters for the word 'typewriter' were located in the top-row of the keyboard by Remington, so that their sales-people could demonstrate their typing skills when selling the company's mechanical typewriters.

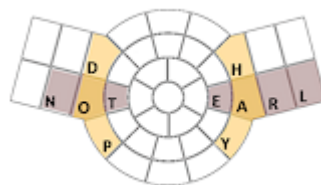
Our tests show that users using the Radial Keyboard's optimised layout design shown below can memorise the alpha-characters layout in 10 to 20 minutes.



Our Android App – Optimised/Efficient Radial Keyboard layout

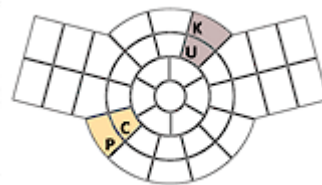
Remember that the alpha-characters are those which are typed most of the time by most people. It follows that if the user has memorised where these are located on the keyboard layout, they should improve both their typing speed and accuracy. Testing has also shown that memorising the alpha-characters layout can best be achieved by the use of various words, acronyms and mnemonics, which are unique to the optimised layout of the Radial Keyboard. These are shown below.

Words



(NOT, POD, EARL & HAY)

Acronyms



(UK & PC)

Mnemonics

- > For left-upper-wing: Just Before Dawn Starts
- > For right-upper-wing: I Hate Waste eXcess
- > For left-lower-wing: Master Now Or Then
- > For right-lower-wing: Every Actor Rote Learns

The proposed mnemonics relate to the keys in each of the bee's wings. These are easy to remember, as there are only four alpha-characters to any one wing. The user is free to decide which of the above mentioned learning approaches best suits them but the use of *words* and *acronyms* approach seems to work best for most people who have tested it.

More information is available from the 'Support' webpage on our website (www.BeeRaider.com).

We haven't devised any method for learning the QWERTY layout shown below, but the user will note that the character positions are still easier to remember because worse-case, there are only a maximum of four characters in any wing-section of the main key-cluster shown. Of course having only four fingers to naturally fall on these ergonomically placed keys also helps when typing.



Our Android App - QWERTY Radial Keyboard layout

4. Press Articles

4.1 BeeRaider's Radical New Keyboard Design Could Transform How We Type

<http://ces2010.ulitzer.com/node/2321675>

4.2 BeeRaider brings insane new keyboard app to Android

<http://androidspin.com/2012/03/12/beeraider-brings-insane-new-keyboard-app-to-android/>

4.3 CEA Launches Innovation Zone at 2012 CEA Line Shows

<http://www.tmcnet.com/usubmit/2012/06/27/6399321.htm>

4.4 BeeRaider Keyboard: la tastiera per Android che sembra un'ape!

<http://www.techzilla.it/beeraider-keyboard-tastiera-android-sembrano-unape-24299/>

5. Press Releases

5.1 March 09, 2012, 03:00 AM EST

Title

BeeRaider Launches Radical New Keyboard Design for Android Tablets and Smartphones

<http://www.pr.com/press-release/396487>

5.2 July 28, 2012, 03:00 AM EST

Title

BeeRaider's Radical New Keyboard Design Could Transform How We Type (Video)

Summary

Irish company BeeRaider has developed a radical new keyboard design specifically for modern-day usage and, having already launched a touchscreen app demonstrating the layout, is seeking investment to deliver a physical product in 2013 and to license its keyboard IP.

<http://www.pr.com/press-release/430467>

6. Quote Sheet

“The advent of a new era in portable computing devices has further exposed the inherent weaknesses of the QWERTY design and we believe that the time is now right for an alternative solution in the form of our new logical, ergonomic and efficient Radial keyboard design, which is aimed at providing the first real alternative to the inefficient QWERTY design.”

Ray McEnaney – Radial Keyboard designer and owner of BeeRaider.

“BeeRaider keyboards may well revolutionise computer data-entry”

Seamus Rispin – Marketing Manager for BeeRaider.

7. Management

7.1 Bios

7.1.1 Ray McEnaney – Managing Director

Qualifications: MSc, HDip, FTC

Background:

Ray has a Master’s Degree in Computer Science from Sligo Institute of Technology and a Higher Diploma in Electronics Engineering from Dundalk Institute of Technology, where he gained valuable technical experience working as a Technical Officer. Other qualifications include a Full Technological Certificate (Electrical) from City & Guilds of London Institute.

He has over 33 years of experience in the Electronics and IT Industries and is the founder of BeeRaider and the originator of the Radial Keyboard design. Before starting BeeRaider he previously ran his own ITC business where he gained valuable business experience.

In running BeeRaider he was initially responsible for managing the design and offshore development of BeeRaider's Android Keyboard App, which was outsourced for development to an Indian company in 2011-2012. This App was launched by him in NYC at the CEA LineShow in June 2012, where BeeRaider was one of only ten companies invited to exhibit at the show's newly launched *Innovation Zone*.

He has been responsible for acquiring investment in BeeRaider and conducting all due diligence, before awarding the contract for the development of the company's first physical keyboard, which was outsourced to an Asian keyboard OEM in the first quarter of 2014. The subsequent management, design and offshore development of two working keyboard prototypes were his sole responsibility during this time. This project was also completed successfully and the company's first physical keyboard is now pending manufacture.

Ray has extensive experience in both hardware and software computer technology and possesses strong analytical and creative abilities. Having an entrepreneurial spirit means that he's unafraid when it comes to taking calculated risks and he has demonstrated his ability to conceive, plan, manage and successfully deliver projects of a technical nature.

7.1.2 Seamus Rispin – Marketing Manager

Qualifications: MBA, MSc, MBCS, PgD.

Background:

Seamus was a founder and Managing Director of his own company for five years. During this period he raised investment of one Million Euro and achieved *New Company of the Year* in Ireland. He also developed strong presentation and communication skills, utilised effectively in difficult circumstances.

He has lectured in Dundalk Institute of Technology for 16 years in the Business Studies School. Seamus has a Master's Degree in Computer Science from Sligo Institute of Technology and a Master's Degree in Business Administration from the University of Ulster. In addition, he is a professional member of the British Computer Society and is currently a serving member of the Academic Council in Dundalk Institute of Technology. Other qualifications include a Post Graduate

Diploma in Management Studies, National Diploma in Technology, National Certificate in Engineering (Electronics).

Seamus has extensive experience in management and computer technology and possesses drive and great analytical abilities. He demonstrates strategic and tactical thinking, planning and decision-making skills.

7.2 Business Cards



8. Frequently Asked Questions (FAQ)

Q1. Do you have a Radial Keyboard App for Apple iPhone and iPads?

Not at present. However, now that Apple has allowed third party changes to be made to their IOS system in their recently released version 8, we expect to provide a Radial Keyboard App for Apple products in the future.

Q2. When will BeeRaider release a Bluetooth portable version of their Radial Keyboard design?

This will likely be our second physical product, which we expect to launch as a follow-up to our PC wireless desktop keyboard.

Q3. Why is your current Android Keyboard App not free?

We originally conceived it as a virtual prototype for use as a proof-of-concept for our Radial Keyboard design. Our intention is to upgrade it for sale before deciding on giving the current version away for free.

Q4. What testing have you done?

We have carried out limited testing by comparing our Optimised Radial Keyboard App against the Android default QWERTY keyboard and the results have been in line with expectations. Further independent testing is set to continue when our first physical keyboards become available. They will allow us to conduct more in-depth testing and validation of the design before we publish the final results. We are confident that the hopes we have invested in our Optimised Radial Keyboard design will be fully vindicated.