TOUCH				Virtu	al Keyboards
🗐 documentation					Revision 1.9, 28 <sup>th</sup> Feb 2011 om\ <u>documentation</u> \utilities
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There exist a number of useful utilities to enhance the touch experience and some of these utilities are integrated into the UPDD touch software. Virtual keyboards (on-screen graphical keyboards) are one of the most useful touch applications, especially where data entry is required and a physical keyboard is not available.



This document highlights a number of virtual keyboards that we have used and should be sufficient to satisfy most user requirements. This document does not try to be a comprehensive review of available virtual keyboards and we acknowledge that there are many more available, details of which can be obtained via the internet.

## Windows

## System keyboard

Since Windows 2000 the system ships with a basic virtual keyboard, found under the Accessibility program group. When first invoked the system states that "the keyboard provides a minimum level of functionality for mobility-impaired users. Mobility-impaired users will need a utility program with higher functionality for daily use" the underlying message is this is basic adaptation of a virtual keyboard. There is not a secure mode version so the keyboard is not available when in a secure desktop, such as logging in etc.

On-Screen Keyboard			
File Keyboard Settings Help			
esc F1 F2 F3 F4 F5 F6 F7 F8 F9 F10 F11 F12 psc slk brk			
1234567890-= bksp ins hm pup	nlk	1	* -
tab q W e r t y u i O p [ ] # del end pdn	7	8	9
lock a s d f g h j k l ; ' ent	4	5	6 🕇
shft z x c v b n m , . / shft 🔶	1	2	3
ctrl 🏞 alt 🚺 🖬 ctrl ← ↓ →	0		• ent

Windows system virtual keyboard

Standard system keyboards are acceptable as entry level keyboards that satisfy a functional requirement but offer minimum extensibility. Where presentable and functional keyboards are a requirement for professional and commercial usage there are a number of licensed products available.

## Eyesboard

The EvesBoard product from PlazaLOGIC offers a high visual impact and enhanced functionality, offering both secured and desktop keyboards.





Evaluation software and full documentation is available on their site. The keyboard actions can be controlled from applications via an Eyesboard API. Documentation regarding the API and registry settings and a small API demo application can be downloaded from <u>here</u>.

Keyboard template files can be easily edited. Keyboard template files (board.xxx.yyy.xml) define the keyboard layout. For example, to remove the option to close the keyboard (X in top right corner) the line command="eyesboard.close" is deleted from the relevant keyboard XML file.

Many other similar on-screen keyboards are available for Windows. Here is a small selection:

## **Touch-It Virtual Keyboard**

Available from Chessware SA at http://www.chessware.ch/virtual-keyboard

## **Hot Virtual Keyboard**

Available for Windows 7 from Comfort Software Group at http://hot-virtual-keyboard.com



Free version also appears to be available at http://www.freevirtualkeyboard.com/

## **My-T-Soft Virtual Keyboard**

Available from Innovation Management Group at <a href="http://www.my-t-soft.com">http://www.my-t-soft.com</a>

Esc		F1	F2	F3	F4	F	F6	F7	FB	F	9 F1	0 F1	1 F12	Prt	Ser	Рац	Ca	P N	um S	icr_
	1	2	3	4	5	6	7	8	9	0		=	t	Ins	Hme	Pup	Num	1	*	-
Tab	9	ω	е	Г	t	Ч	U	i	0	Р	E	1		Del	End	Pdn	7	8	9	
Caps	a	5	d	f	9	h	j	k	1	;		Er	nter				4	5	6	subsi
Shi	ift	z	×	c	v	Ь	n	m			1	Shif	t 🔨		1		1	2	З	
Ctrl		Al	t	Π,	須臣	-a	121	2112	1741	2	Alt		Ctrl	+	Ļ	1	6	3		

IMG's My-T-Soft Family includes My-T-Pen, My-T-Soft, My-T-Touch, OnScreen for Assistive Technology, and Build-A-Board Keyboard Designer Tools.

The latest Build-A-Board Keyboard Designer Tool, supporting many OS, is available June 2010 and offers the ability to create a single button macro or hundreds of keys and interlaced panels.

## **Oska On-Screen Keyboard Application**

Available from Claro Software at http://www.oskaworld.com/category/oska-for-touch-screen.php

### **Click-N-Type On-Screen virtual keyboard**

Available from The Lake Software folks at http://cnt.lakefolks.com

### Available from Claro Software

### **Comfort On-Screen Keyboard**

Available from Comfort Software at http://www.comfort-software.com/on-screen-keyboard.html

Comfort On-Screen Keyboard supports all characteristics of the regular keyboard (for instance, repeated keystrokes when you hold down a key) and has **additional advantages**:

- Displaying the icons of shortcuts of Windows® and popular applications.
- Displaying characters actually typed in **any language**, which allows you to type text without a localized keyboard.
- Customizing the keyboard

appearance (the position, size and number of keys, the color and the skin) with the possibility to select it from a large number of available templates (without having to buy a new keyboard)

• **Color areas** for fingers (if necessary) in case you learn to touch type. It is convenient because when you press a key, you can see it pressed on the on-screen keyboard!

On-Screen Keyboard
Keyboard with finger zones
Transparent Keyboard
UMPC Samsung Q1Ultra

### **UPDD** Toolbar virtual keyboard option

The UPDD Toolbar function offers the ability to associate areas of the touch screen with specific touch functions, such as a single touch to invoke a virtual keyboard. Toolbars are explained in full in the <u>Toolbar document</u>.

A toolbar can be created specifically to invoke a virtual keyboard and the keyboard option caters for the System and Eyesboard keyboards described above:

🖳 Change Cell Options	
Specify the action to take when th	is toolbar cell is pressed
	Cell 1, Row 1, Column 1
Type of action	
UPDD action	🛱 Copy next keyboard input
Action	
Keyboard	🕙 🔲 Toggle
🔲 System 🛛 📝 EyesBoa	rd

In this example a toolbar has been created such that when the toolbar is touched the Eyesboard will be invoked. The enabled Toogle check box defines that the application is it be removed on touch if it is currently active.

If a different virtual keyboard is in use then a toolbar can be defined to invoke the keyboard application directly (via the full pathname).

## **Windows Mobile**

### Pocket CM

This keyboard mimics the iPhone keyboard and is available at http://www.pocketcm.com



# TouchPal

Neat keyboard concept from CooTek and is available at http://www.cootek.com



# Mac OS X

# System keyboard

Since Mac OS X 10.4 the system ships with a basic virtual keyboard, which can be enabled under the System Preferences, International, Input Menu.

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esc	F1	FZ	F3	F	1	F	5 F	6	F7	F8		F9	F1	0 F	11 F12	F13	F14	F15				
1	1	2	3	4	5	6	7	2	8	9	0		-	=	$\otimes$	0	1	Ŧ	X	=	1	*
-+1	q	W	e	r		t	y	u	i	0	o	р	1	1	1	$\boxtimes$	5	4	7	8	9	-
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~	7	3	8										Ħ	1	^	+	4			0	+0	

Mac OS 10 system virtual keyboard

### TouchStrokes

One of the most popular Mac OS X virtual keyboards available is called TouchStrokes and can be found at <a href="http://www.assistiveware.com/touchstrokes.php">http://www.assistiveware.com/touchstrokes.php</a>.

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§	1	2	3	4	5	6	7	8	9	0	-	-	$\otimes$	?	1	#
→I	q	w	e	r	t	У	u	i	0	p	I	1	t,	∞	>	ŧ
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↔	•	z	x	с	v	b	n	m	,	•	1	4	2		Ť	
^	~		×							ж	2		^	+	Ļ	+

**Virtual Keyboard** 

Shareware product available at <a href="http://www.corallosoftware.it/">http://www.corallosoftware.it/</a>

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			f15	f14	f13	1 f12	f10 f1	f9	f8		f7	f6	f5	)(	f4	f3	f2	1	f	ic .	E
1	=		Up	Но	Hel	Del	1		T	9	8	T	7	6	5	1	4	3	2		<
9	8	7	Dn	End	Del	ù	è +	р	0		1	u	y	T	t	r	e	N	1	q	Tab
6	5	4				Ret	à	ò	1	1	k	j	h	Î	g	f	d	s	1	a	ock
3	2	1		$\uparrow$		nift	-   S	1.	T		m	1	n	b	v	T	c	x	z	T	Shift
m	5	0	<b>→</b>	4	4	Com	Opt	Ctl	Ĩ								m	Co	pt	0	Ctl
;	6	8 9 5 6 2 3	7 8 9	Up = / Dn 7 8 9 4 5 6 1 2 3	Ho Up = / End Dn 7 8 9 4 5 6 ↑ 1 2 3	Del End Dn 7 8 9 4 5 6 ↑ 1 2 3	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Dash   f10 f11 f12 f13 f14 f15   ' ì Del Hel Ho Up = /   è + ù Del End Dn 7 8 9   à Ret 4 5 6   - Shift ↑ 1 2 3	Coom Dash   f9 f10 f11 f12 f13 f14 f15   0 ' ì Del Het Ho Up = /   p è + ù Del End Dn 7 8 9   ò à Ret 4 5 6 . - Shift ↑ 1 2 3	f8 f9 f10 f11 f12 f13 f14 f15   0 ' ì Del Hel Ho Up = /   0 p è + ù Del End Dn 7 8 9   l ò à Ret 4 5 6   . - Shift ↑ 1 2 3	ref Zoom Dash r f8 f9 f10 f11 f12 f13 f14 f15 9 0 ' ì Del Hel Ho Up = / 0 p è + ù Del End Dn 7 8 9 1 ò à Ret 4 5 6 , Shift ↑ 1 2 3	Pref Zoom Dash   f7 f8 f9 f10 f11 f12 f13 f14 f15   8 9 0 ì Del Hel Ho Up = /   i 0 p è + ù Del End Dn 7 8 9   k l ò à Ret 4 5 6   m , - Shift ↑ 1 2 3	te Pref Zoom Dash f6 f7 f8 f9 f10 f11 f12 f13 f14 f15 8 9 0 ' ì Del Hel Ho Up = / u i o p è + ù Del End Dn 7 8 9 j k l ò à Ret 4 5 6 m , Shift $\uparrow$ 1 2 3	Paste   Pref   Zoom   Dash     f5   f6   f7   f8   f9   f10   f11   f12   f13   f14   f15     7   8   9   0   ì   Del   Hel   Ho   Up   =   /     y   u   i   0   p   è   +   ù   Del   End   Dn   7   8   9     h   j   k   l   ò   à   Ret   4   5   6     n   m   ,   -   Shift   ↑   1   2   3	all Paste Pref Zoom Dash   f5 f6 f7 f8 f9 f10 f11 f12 f13 f14 f15   6 7 8 9 0 ' ì Del Hel Ho Up = /   y u i 0 p è + ù Del End Dn 7 8 9   h j k l ò à Ret 4 5 6   b n m , - Shift ↑ 1 2 3	Sel all Paste Pref Zoom Dash   f4 f5 f6 f7 f8 f9 f10 f11 f12 f13 f14 f15   5 6 7 8 9 0 ì Del Hel Ho Up = /   t y u i o p è + ù Del End Dn 7 8 9   g h j k l ò à Ret 4 5 6   v b n m , - Shift ↑ 1 2 3	by Sel all Paste Pref Zoom Dash f3 f4 f5 f6 f7 f8 f9 f10 f11 f12 f13 f14 f15 5 6 7 8 9 0 ' ì Del Hel Ho Up = / r t y u i o p è + ù Del End Dn 7 8 9 f g h j k l ò à Ret 4 5 6 v b n m , Shift ↑ 1 2 3	Copy Sel all Paste Pref Zoom Dash   f2 f3 f4 f5 f6 f7 f8 f9 f10 f11 f12 f13 f14 f15   4 5 6 7 8 9 0 i Del Hel Ho Up = /   e r t y u o p è + ù Del End Dn 7 8 9   d f g h j k l ò à Ret 4 5 6   c v b n m . - Shift ↑ 1 2 3	ut Copy Sel all Paste Pref Zoom Dash 1 f2 f3 f4 f5 f6 f7 f8 f9 f10 f11 f12 f13 f14 f15 3 4 5 6 7 8 9 0 ' ì Del Hel Ho Up = / v e r t y u i o p è + ù Del End Dn 7 8 9 s d f g h j k l ò à Ret 4 5 6 x c v b n m , Shift ↑ 1 2 3	Cut Copy Sel all Paste Pref Zoom Dash   f1 f2 f3 f4 f5 f6 f7 f8 f9 f10 f11 f12 f13 f14 f15   2 3 4 5 6 7 8 9 0 i Del Hel Ho Up = /   W e r t y u i 0 p è + ù Del End Dn 7 8 9   s d f g h j k l ò à Ret 4 5 6   z x c v n m . - Shift ↑ 1 2 3	I 2 3 4 5 6 7 8 9 0 ' Ì Del Hel Ho Up = / q w e r t y u i o p è + ù Del End Dn 7 8 9 a s d f g h j k l ò à Ret t z x c v b n m , Shift ↑ 1 2 3

# Linux

xvkbd

Is a freely available virtual keyboard program for X Window systems and can be found at http://homepage3.nifty.com/tsato/xvkbd/.

🔽 xvkbd - Virtual Keyboard	
F1 F2 F3 F4 F5 F6 F7 F8 F9 F10 F11 F12 Backspace	xvkbd (v2.3)
Esc ! @ # \$ % ^ & * ( ) +     ~	Num / * Focus
	7 8 9 Home Up PgUp +
Control A S D F G H J K L ; , Return	4 5 6 Left Right –
Shift Z X C V B N M C > ? Com Shift Shift	1 2 3 End Down PgDn
xvkbd Caps Alt Meta Meta Alt ← → ↑ ↓ Focus	0 . Ins Del

## Vkeyboard

Another freely available virtual keyboard program for X Window systems and can be found at http://kiosk.mozdev.org/.

### The following keyboards are all documented at http://tuxmobil.org/tablet\_unix.html

## xvkbd - virtual keyboard for X window system

<u>xvkbd</u> dis a virtual (graphical) keyboard program for X Window System which provides facility to enter characters onto other clients (softwares) by clicking on a keyboard displayed on the screen. This may be used for systems without a hardware keyboard such as kiosk terminals or handheld devices. This program also has facility to send characters specified as the command line option to another client.

## **GNOME On-screen Keyboard (GOK)**

The <u>GNOME On-screen Keyboard (GOK)</u> is a dynamic on-screen keyboard for UNIX and UNIX-like operating systems. It features Direct Selection, Dwell Selection, Automatic Scanning and Inverse Scanning access methods and includes word completion.

### Florence

Florence aris a virtual keyboard for GNOME that appears on screen. It is adapted for people who are able to use a pointing device but have difficulties using a real keyboard. It aims at being easy and pretty.

### kbde

<u>kbde</u> is a keyboard emulator. The goal is to provide tools for emulation of keyboard input on keyboardless (x86) computers. It includes a keyboard emulator driver and a user-space program, as well as a library which make it easy to write custom applications able to create keyboard input emulation.

### GTKeyboard

<u>GTKeyboard</u> is an application written in C with the aid of the Gimp Toolkit. It is intended to help users with physical disabilities to enter text into a simple editor, as well as to help them use other X11 applications that require keyboard input. GTKeyboard allows the user to press keys on an onscreen keyboard that will either be entered into a simple text editor that GTKeyboard provides, or into the application of choice that the user specifies by clicking on the window. It has also been used by people who have strange keyboard layouts, and by people who for one reason or another cannot use a keyboard with the machine in question.

### matchbox-keyboard -- On-Screen Keyboard

<u>Matchbox-keyboard</u> is an on screen 'virtual' or 'software' keyboard. It will hopefully work well on various touchscreen devices from mobile phones to tablet PCs running X Windows. You can embed matchbox-keyboard into other applications with toolkits that support the XEMBED protocol (GTK2 for example).

# Android

A selection of Android keyboards:

Name	URL
Keypurr	http://keypurr.com/
Swype	http://swypeinc.com/
Swiftkey	http://www.swiftkey.net/

## Contact

For further information or technical assistance please email the technical support team at technical@touch-base.com.