Comparison of All Elo Touch Technologies

	Acoustic Pulse Recognition	Resistive		Surface Acoustic Wave (SAW)			Capacitive		Infrared
	APR	AT4 4-wire	AccuTouch 5-wire	IntelliTouch	SecureTouch	iTouch	Surface Capacitive	Projected Capacitive	CarrollTouch
Performance									
Speed	+++	+++	+++	+++	+++	+++	+++	––	
Sensitivity	++			++	++	+++	+++		+++
Resolution	+++	+++	+++	+++	+++	+++	+++		+++
Accuracy	+++		+++	+++	+++	+++	––	––	+++
Calibration Stability	+++		+++	+++	+++	+++	––		+++
Drag	+++					++	+++		+++
Z-axis	–––	–––	–––	+++	+++	+++	–––	–––	–––
Double Touch 1	+++	––	––	+++	+++	+++	––		
Parallax (lack of)						+++ [2]		––	–– [3]
Input Flexibility									
Glove	++ [4]	+++	+++	+++	+++	+++	–––	+++	+++ [4]
Fingernail	+++	+++	+++	–––	–––	–––	–––	––	++
Credit Card	+++	+++	+++	–––	–––	–––	–––	–––	++
Pen	+++	+++	+++	–––	–––	–––	–––	–––	++
Signature Capture	+++	+++	+++	–––	–––	–––	–––	–––	–––
Handwriting Recognition	++	––	––	–––	–––	–––	–––	–––	–––
Optics									
Light Transmission	+++	––	––	+++	+++	+++ [5]	––		+++
Reflection (lack of)	+++			+++	+++	+++ [5]	–––		+++
Clarity	+++			+++	+++	+++			+++
Color Purity	+++	––	––	+++	+++	+++			+++

(Continued on next page)

Key	
+++	Best in category
++	Some advantage
	Neutral
––	Perhaps not acceptable
–––	Not possible, worst in category

Notes

1   –– = Incorrect (averaged) coordinate reported.
    +++ = Simultaneous touches rejected; nearly simultaneous touches reported accurately.

2   Touch is closest to image, as there is no overlay.

3   Touch activates just before actual contact (1 mm).

4   Only technology recommended for metal gloves.

5   The utmost possible, as there is no overlay.

6   For LCDs only; plasma is not possible, due to EMI.

7   Special sealing materials required (Elo touchmonitors are watertight sealed).

8   Assuming proper materials are used.

9   Although splashing liquids are OK, extended rain and humidity exposure can lead to internal condensation.

10   Works with stationary water drops; excessive or moving water must be wiped away.

11   Polyester coversheet may yellow after years of exposure.

12   Required for food processing and some in-vehicle applications.

No guarantee of acceptability of the technology to the application is implied by this quick reference table.

	Acoustic Pulse Recognition	Resistive		Surface Acoustic Wave (SAW)			Capacitive		Infrared
	APR	AT4 4-wire	AccuTouch 5-wire	IntelliTouch	SecureTouch	iTouch	Surface Capacitive	Projected Capacitive	CarrollTouch
Mechanical									
Small Sizes (<10")	+++	+++	– –	– –	– –	– –		– –	– –
Large Sizes (>19")	+++	– – –	– –	+++	– – –		– – [6]		+++
Curved CRTs		– – –			– – –	+++		– – –	– – –
Ease of Integration	++	+++	+++	– –	– –	– –	++	– –	
Sealability	+++	+++	+++	– – [7]	– – [7]	– – [7]	+++	+++	+++
IP 65/NEMA 4	+++	+++	+++	– – –	– – –	– – –	+++	+++	+++
Electrical									
Controller Chip Available		+++	+++				+++		+++
Low Power/Battery Operation	TBD	+++							
Operation with Poor Ground	+++						– – –	– – –	
ESD	+++		+++	+++	+++	+++	– –		+++
EMI/RFI	+++	+++	+++	+++	+++	+++	– –	– – –	+++
Environmental									
Temperature	+++						+++	+++	+++
Humidity	+++							+++	+++
Shock/Vibration		+++	+++						+++
Altitude	++								+++
In-vehicle	TBD	++	++						+++
Chemical Resistance	+++	+++	+++				– – –	+++	+++
Scratch Resistance	+++			+++	+++	+++		+++ [8]	+++ [8]
Breakage Resistance					+++	+++		+++ [8]	+++ [8]
Safe Break Pattern		++	++		+++			+++	+++

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Dust/Dirt	+++	+++	+++				+++	+++	– –
Liquids	++	+++	+++	– –[10]	– –[10]	– –[10]	+++	+++	– –
Rain	++	– – –[9]	– – –[9]	– – –	– – –	– – –		+++	– –
Snow		– – –	– – –	– – –	– – –	– – –	– –	+++	– –
Ice		– – –	– – –	– – –	– – –	– – –	– –	+++	– –
Ambient/UV Light	+++	– –[11]	– –[11]						
Fly on Screen	+++								– – –
Non-Glass Surface Possible[12]	+++	+++	+++					+++	+++
Works Through Other Materials	++	– – –	– – –	– – –	– – –	– – –	– – –	+++	
Durability/Wear	+++	– –	++	+++	+++	+++	++	+++	+++
Surrounding Metal	+++						– –	– –	
Reliability/ Warranty Length	+++	– – –		+++	+++				+++
Lowest Cost		+++				++		– –	– –

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