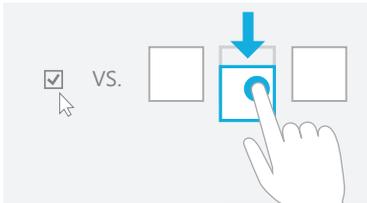## Use Windows 8 touch language

Windows 8 provides a concise set of touch interactions used consistently throughout the system. Applying this language consistently makes your app feel familiar to what users already know. This increases user confidence by making your app easier to learn and use.

Use fingers for what they're good at

A mouse and pen are precise, while fingers aren't, and small targets require precision. Use large targets that support direct manipulation and provide rich touch interaction data. Swiping down on a large item is quick and easy because the entire item is a target for selection.
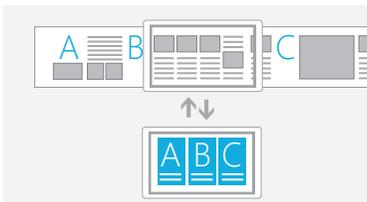
Browsing content with touch

Semantic zoom and panning make reading and navigating content fast and fluid. Instead of putting content in multiple tabs or pages, use large canvases that support panning and Semantic Zoom.
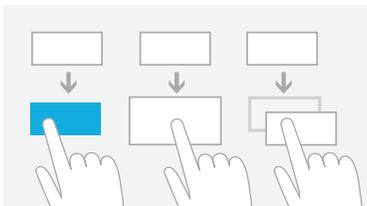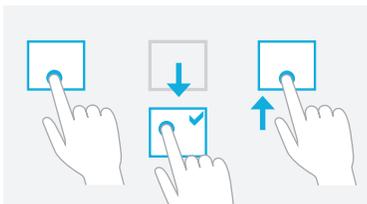
Provide feedback

Increase user confidence by providing immediate visual feedback whenever the screen is touched. All interactive elements should react by changing color, changing size, or by moving. Items that are not interactive should show system touch visuals only when the screen is touched.
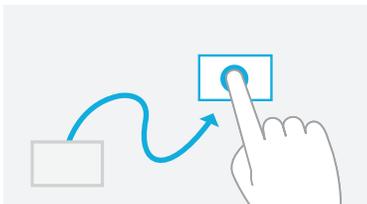
Content follows finger

Elements that can be moved or dragged by a user, such as a canvas or a slider, should follow the user's finger when moving. Buttons and other elements that do not move should return to their default state when the user slides or lifts their finger off the element.

Keep interactions reversible

If you pick up a book, you can put it back down where you found it. Touch interactions should behave in a similar way—they should be reversible. Provide visual feedback to indicate what will happen when the user lifts their finger. This will make your app safe to explore using touch.
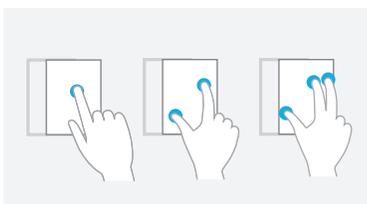
Allow any number of fingers

People often touch with more than one finger and don't even realize it. That's why touch interactions shouldn't change radically based on the number of fingers touching the screen. Just like the real world, sliding something with one or three fingers shouldn't make a difference.

Keep interactions untimed

Interactions that require compound gestures such as double tap or press and hold need to be performed within a certain amount of time. Avoid timed interactions like these because they are often triggered accidentally and are difficult to time correctly.
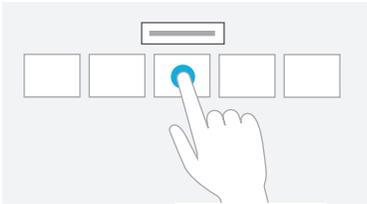
Press and hold to learn

This touch interaction causes detailed information or teaching visuals (for example, a tooltip or context menu) to be displayed without a commitment to an action. Anything displayed this way should not prevent users from panning if they begin sliding their finger.
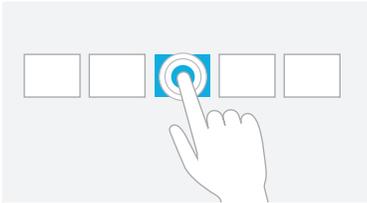
Tap for primary action

Tapping on an element invokes its primary action, for instance launching an application or executing a command.
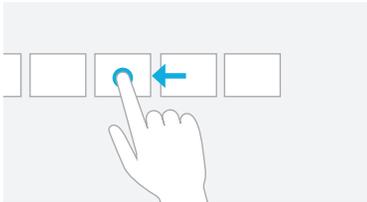
Slide to pan

Slide is primarily used for panning interactions but can also be used for moving, drawing or writing. Slide can also be used to target small, densely packed elements by scrubbing (sliding the finger over related objects such as radio buttons).
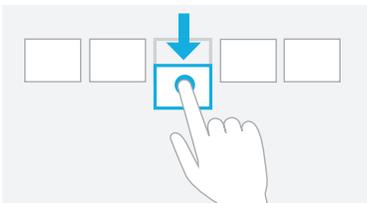
Swipe to select, command, and move

Sliding the finger a short distance, perpendicular to the panning direction, selects objects in a list or grid (ListView and GridLayout controls). Display the AppBar with relevant commands when objects are selected.
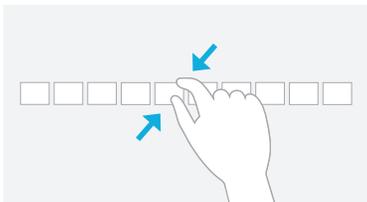
Pinch and stretch to zoom

While the pinch and stretch gestures are commonly used for resizing, they also enable jumping to the beginning, end, or anywhere within content with Semantic Zoom. A SemanticZoom control provides a zoomed out view for showing groups of items and quick ways to dive back into them.
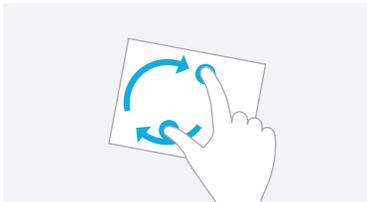
Turn to rotate

Rotating with two or more fingers causes an object to rotate.
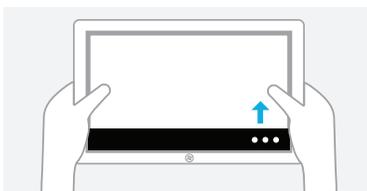
Swipe from edge for app commands

App commands are revealed by swiping from the bottom or top edge of the screen. Use the AppBar to display app commands.
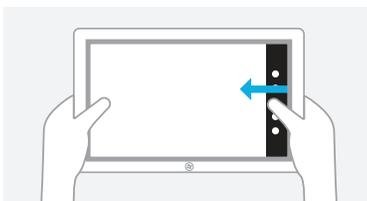
Swipe from edge for system commands

Swiping from the right edge of the screen reveals the charms which contain system commands. Swiping from the left edge switches to previously used apps. Swiping from the top edge toward the bottom edge of the screen lets you dock or close apps.

TOUCH Posture

Designing for touch is more than designing what's displayed on the screen. It requires designing for how the device will be held (grip).

Typically, different people have a few favorite grips when holding a tablet. The current task and how it's presented usually determines

which grip is used. However, the immediate environment and physical comfort also affect how long a grip is used and how often it's changed.

Try optimizing your app for different kinds of grips. But if an interaction naturally lends itself to a specific grip, optimize for that.

Interaction areas

OK

Better

Best

Because slates are most often held along the side, the bottom corners and sides are ideal locations for interactive elements.

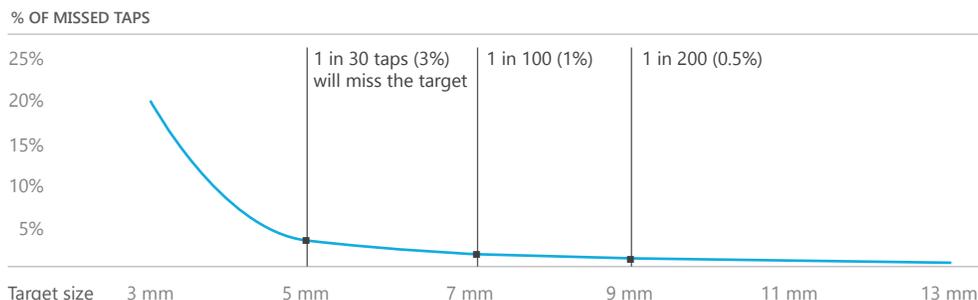## Reading areas

Best

Better

OK

Content in the top half of the screen is easier to see than content in the bottom half, which is often blocked by the hands or ignored.

Four most common ways to hold a tablet:

| GRIP AND INTERACTION	DESIGN CONSIDERATIONS
One hand holding, one hand interacting with light to medium interaction	▪ Right or bottom edges offer quick interaction ▪ Lower right corner might be occluded by hand and wrist ▪ Limited reaching makes touching more accurate ▪ Reading, browsing, email, and light typing
Two hands holding, thumbs interacting with light to medium interaction	▪ Lower left and right corners offer quick interaction ▪ Anchored thumbs increase touching accuracy ▪ Anything in the middle of the screen is difficult to reach ▪ Touching middle of screen requires changing posture ▪ Reading, browsing, light typing, gaming
Device rests on table or legs, two hands interacting with light to heavy interaction	▪ Bottom of the screen offers quick interaction ▪ Lower corners might be occluded by hands and wrists ▪ Reduced need for reaching makes touching more accurate ▪ Reading, browsing, email, heavy typing
Device rests on table or stand, with or without interaction	▪ Bottom of screen offers quick interaction ▪ Touching top of the screen occludes content ▪ Touching top of screen might knock a docked device off balance ▪ Interaction at a distance reduces readability and accuracy ▪ Increase target size to improve readability and precision ▪ Watching a movie, listening to music

Size vs. Efficiency: Target size influences error rate

There's no perfect size for touch targets. Different sizes work for different situations. Actions with severe consequences (such as delete and close) or frequently used actions should use large touch targets with enough padding to avoid accidental taps. Infrequently used actions with minor consequences can use small targets.

% OF MISSED TAPS

		1 in 30 taps (3%) will miss the target	1 in 100 (1%)	1 in 200 (0.5%)		

25%
20%
15%
10%
5%

Target size 3 mm   5 mm   7 mm   9 mm   11 mm   13 mm

Fat fingers?

People often blame themselves for having "fat fingers." But even baby fingers are wider than most touch targets.

Baby

8 mm
9
10
11 — Average index finger width
12
13
14
15
16
17
18
19 mm

Basketball player
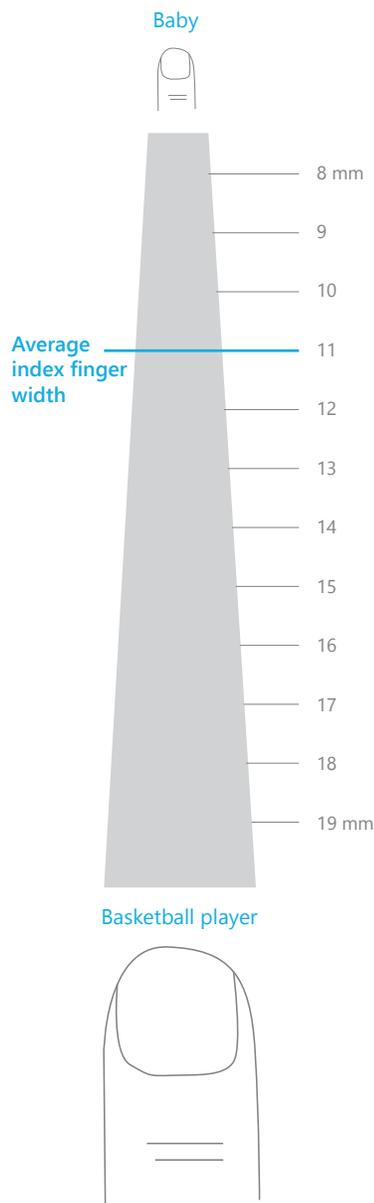
7x7 mm: Recommended minimum size

7x7 mm is a good minimum size if touching the wrong target can be corrected in one or two gestures or within five seconds. Padding between targets is just as important as target size.

7

7 mm = 40 pixels

2mm padding (10 pixels) between targets
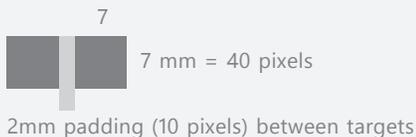
WHEN ACCURACY MATTERS

Close, delete, and other actions with severe consequences can't afford accidental taps. Use 9x9 mm targets if touching the wrong target requires more than two gestures, five seconds, or a major context change to correct.

9

9 mm = 50 pixels

2mm padding (10 pixels) between targets
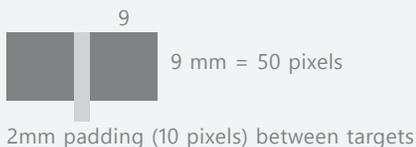
WHEN IT JUST WON'T FIT

If you find yourself cramming things to fit, it's okay to use 5x5 mm targets as long as touching the wrong target can be corrected with one gesture. Using 2 mm of padding between targets is extremely important in this case.

5

5 mm = 30 pixels

2mm padding (10 pixels) between targets

Most people are right handed

Most people hold a slate with their left hand and touch it with their right. In general, elements placed on the right side are easier to touch, and putting them on the right prevents occlusion of the main area of the screen.

VS.