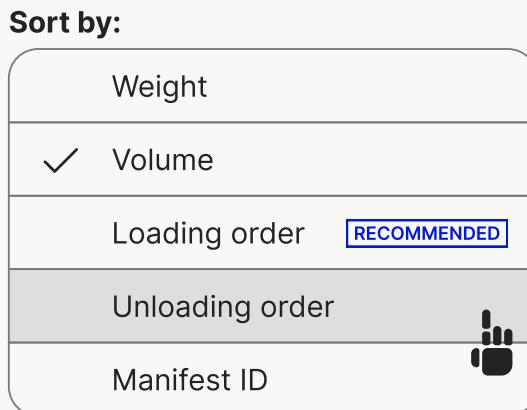


# **Taxonomy for Component States**

# Overview

States are visual feedback for a component's temporary condition. Users rely on their cues to understand and manipulate the UI. Well-designed states support accessibility, improve usability, and contribute to brand expression and delight.



Select menu demonstrating options that are `idle`, `unselected`, `idle`, `selected` and `hovered`, `unselected`.

This document inventories and labels common states, in order to:

- Discuss within a design team and its technical partners
- Scope the work
- Design in a consistent, complete and effective manner
- Structure Figma assets

A [plain text recap](#) is provided, for quick use e.g. building a component set in Figma or listing exit criteria in Jira.

## Methodology

### Scope

States are a broad notion. This document covers direct user interaction feedback component's states.

This excludes application states, that are driven by data status, business logic, system services or back-end calls: incomplete, running or error progress statuses, new/unread, locked/unlocked, unsaved, read-only etc. Those application states may sometimes be displayed on components, but they aren't a response to direct user manipulation.

Caution: not all states are direct user interaction feedback states				
In transfer	4	In cargo hold	Unloaded	Filter
STRUC-001	Modular hab-shell panels (carbon-titanium)		180 crates	
LIFE-202	Atmospheric processors		6 units	
LIFE-214	Water extraction & filtration modules		4 units	
FAB-302	Autonomous fab-constructors (industrial drones)		15 drones	
STRUC-002	Alloy support trusses		90 units	
ENRG-101	Compact fusion core (Mk IV)		2 units	
ENRG-117	Solar array clusters		12 pallets	

For example, the “4 new” indicator of the “In transfer” tab isn’t in scope. While the “new” status does exist, it characterizes a data attribute ( `Read` vs `Unread` ) rather than a component feedback ( `Idle` vs `Pressed down` ). Likewise, the “active” indicator on the filter communicates an application state, that only happens to be depicted on this component. Both indicators are changed not by interacting directly with the component, but by performing actions within the panel associated to it.

Furthermore, component states are also different from components properties such as size, emphasis, theme etc. Those properties are set at design time and don’t change at runtime.

User-triggered states are transient: they cycle in quick succession. Thus a good rule of thumb to tell them apart from other attributes is whether they reset on page load. If yes, they are likely components’ states, as covered in this document.

## Conventions

In this taxonomy:

- States are organized into state categories
- Each state name is unique

- The first state in a category is the default one

# Taxonomy

## Pointer States

```
Idle, Hovered, Pressed down, Disabled, Loading
```

A pointer is a hardware-agnostic representation of input devices that can target a specific coordinate on a screen. This category covers the immediate feedback from mouse, touch or stylus interaction. It's colloquially called "state", although it's only a subset of them.

## Selection States

```
Unselected, Selected, Indeterminate
```

## Focus States

```
Unfocused, Focused
```

## Input States

```
Empty, In progress, Filled
```

Note that "Empty" means "empty of user input", not "empty of any content". There may still be a placeholder, as a component property.

## Validation States

```
No validation, Instructions, Valid, Invalid
```

Note that "Instructions" means "explanations in reaction to user input", not persistent help text. There may still be persistent help text, independently from instructions, as a component property.

## Others

The states listed above are the most common. Further states should be considered on a case-by-case basis, such as "visited" for links or "dragged" for draggable elements.

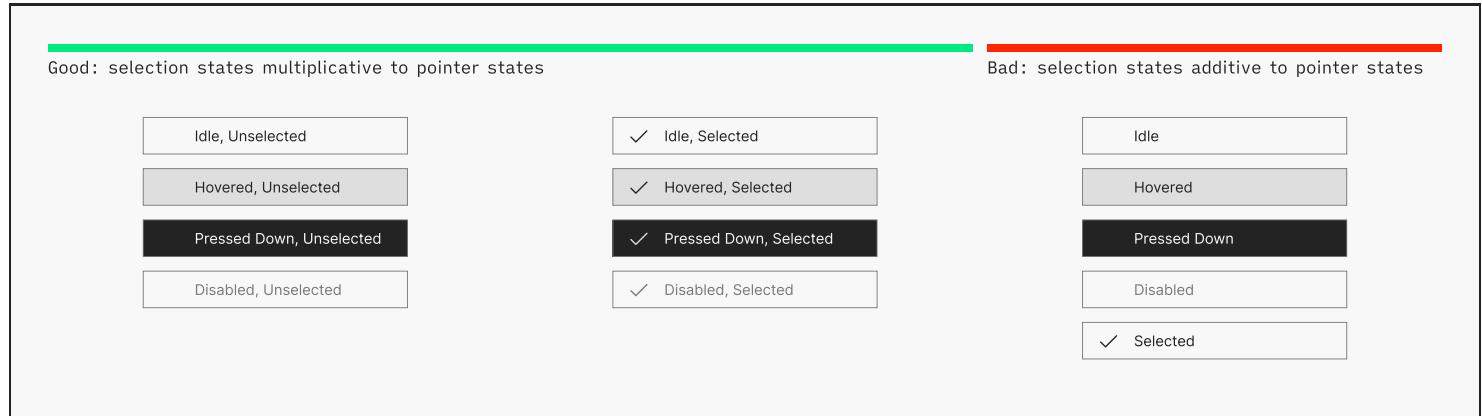
# How-To

Using the provided taxonomy to support design activities.

## Planning

For each component, assess which states from the taxonomy do apply. Not all components have all states: for example, a button has no notion of being “selected” or not. A radio button can be selected, but can’t have an “indeterminate” state.

State categories are multiplicative rather than additive. A select menu item gets “Pointer Feedback” (4 applicable states) and “Selection feedback” (2 applicable states). That’s  $4 \times 2 = 8$  states, not  $4 + 2 = 6$  states.



Comparison of multiplicative and additive state categories for select menu items.

Note that that this step isn’t about “adding” states. Rather, it is about making sure existing states are accounted for, so that design decisions can be made with proper context.

## Design

Just because a state is applicable doesn’t mean it needs a unique design. Some states can be very similar or downright identical to one another in appearance.

Unique design



Reused design



Conversely, designs don't have to be a linear combination of prior choices. Some states can have a unique design, especially to better support specific micro-interactions.

## Unique design



## Reused design



The combination of icon, color, size and shadow (left) conveys the `Selected` state much better than if only an icon had been used (right). Motion could have been used as well.

Finally, be sure to utilize all the possibilities of the target platform: pointers, haptics, audio cues, etc.

## Figma

Name properties or variants with the state categories and states from the taxonomy. This improves consistency for the builder and for the user, in turn improving maintainability and understandability. It's ok to omit the word "state" from category names.

Expose states as variants rather than booleans.

Good structure, complete and consistent across components

**Button**

Pointer State	Idle
Focus State	Unfocused

**Select Item**

Pointer State	Idle
Selection State	Unselected
Focus State	Unfocused

**Tab Item**

Pointer State	Idle
Selection State	Unselected
Focus State	Unfocused

Bad structure, incomplete and inconsistent across components

**Button**

State	Default
Focus	Null

**Select Item**

Checked	False
State	Idle

**Tab Item**

State	At rest
Focus	<input checked="" type="checkbox"/>

Comparison of well-structured and badly-structured component properties in Figma.

## Sources

- [All the user-facing states](#)
- [cursor - CSS | MDN](#)
- [Pointer Events](#) from W3C
- [Web Content Accessibility Guidelines \(WCAG\) 2.1](#) from W3C
- Vendors component libraries and guidelines