

Spectrum Tokens

Component API progress

The problem

Current Spectrum Tokens pain points

- Human error
- Predictability
- Truth in too many places
 - Spectrum Tokens
 - Excel
 - Spec files

Proposed Solutions

What could be changed in Spectrum Tokens to address current shortcomings?

- Component Token relationships
- Token Structure (typing, schema, validation)
- Component Options API
- Deprecation

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Token Name Structure

Proposed Solutions

What could be changed in Spectrum Tokens to address current shortcomings?

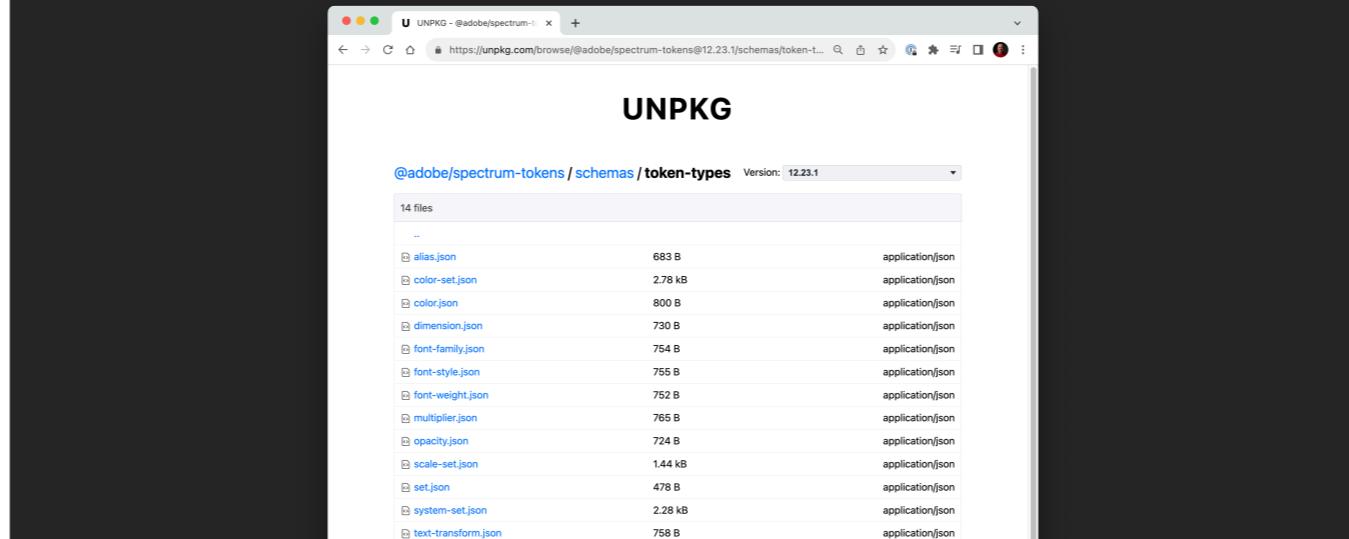
- Component Token relationships 
- Token Structure (typing, schema, validation) 
- Component Options API 
- Deprecation 

Token Name Structure 

Token Structure

Token Structure

Schema

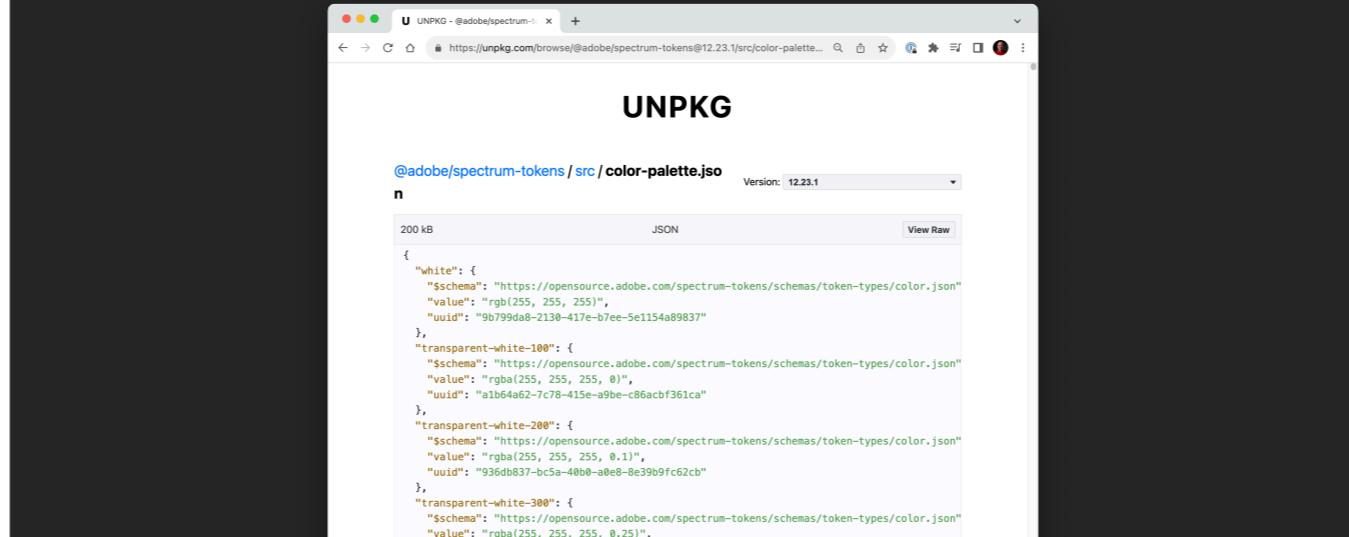


The screenshot shows a browser window titled "UNPKG" displaying the file structure for the "token-types" schema version 12.23.1. The URL is https://unpkg.com/browse/@adobe/spectrum-tokens@12.23.1/schemas/token-types. The interface lists 14 files, all of which are JSON files (application/json) ranging from 683 B to 2.28 kB in size.

File	Size	Type
alias.json	683 B	application/json
color-set.json	2.78 kB	application/json
color.json	800 B	application/json
dimension.json	730 B	application/json
font-family.json	754 B	application/json
font-style.json	755 B	application/json
font-weight.json	752 B	application/json
multiplier.json	765 B	application/json
opacity.json	724 B	application/json
scale-set.json	1.44 kB	application/json
set.json	478 B	application/json
system-set.json	2.28 kB	application/json
text-transform.json	758 B	application/json

Token Structure

Schema



The screenshot shows a browser window with the title "UNPKG" and the URL "https://unpkg.com/browse/@adobe/spectrum-tokens@12.23.1/src/color-palette.json". The page content is a JSON object representing a color palette schema. The schema defines several color tokens, each with a specific name, schema reference, value, and UUID.

```
{
  "white": {
    "$schema": "https://opensource.adobe.com/spectrum-tokens/schemas/token-types/color.json",
    "value": "rgb(255, 255, 255)",
    "uuid": "9b799a08-213b-417e-b7ee-5e1154a89837"
  },
  "transparent-white-100": {
    "$schema": "https://opensource.adobe.com/spectrum-tokens/schemas/token-types/color.json",
    "value": "rgba(255, 255, 255, 0)",
    "uuid": "a1b64a62-7c78-415e-a9be-c86acbf361ca"
  },
  "transparent-white-200": {
    "$schema": "https://opensource.adobe.com/spectrum-tokens/schemas/token-types/color.json",
    "value": "rgba(255, 255, 255, 0.1)",
    "uuid": "936dbb37-bc5a-40b0-a0e8-8e39b9fc62cb"
  },
  "transparent-white-300": {
    "$schema": "https://opensource.adobe.com/spectrum-tokens/schemas/token-types/color.json",
    "value": "rgba(255, 255, 255, 0.25)"
  }
}
```

Token Structure

Schema

- Now
 - Schema added
 - Found some structural issues
 - Automated testing
 - Some alignment with Tokens Studio for Figma data
 - Next
 - Further alignment with Tokens Studio types

Token Name Structure

Token Name Structure

Current

component-top-to-workflow-icon-300

Token Name Structure

Current

component-top-to-workflow-icon-300

- Pros
 - Quick to write
- Cons
 - Consistency
 - Onboarding

Token Name Structure

Current

component-top-to-workflow-icon-300

component	top	workflow-icon	300
Group	Start	End	Index
			Relative

Allow us to validate
And reorder

Token Name Structure

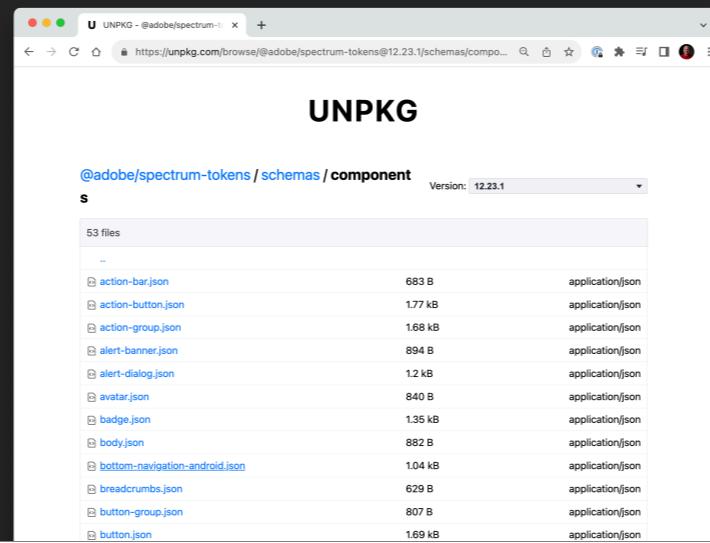
Current

- Now
 - Excel document splitting the token names into parts
- Next
 - Test
- Eventually
 - Find a way for designers/all to author name parts

Component Options API

Component Options API

Schema



The screenshot shows a browser window titled "UNPKG" displaying the file structure for the "component" schema version 12.23.1. The URL is https://unpkg.com/browse/@adobe/spectrum-tokens@12.23.1/schemas/component. The interface lists 53 files, all of which are JSON files (application/json) ranging from 683 B to 1.77 kB in size. The files include action-bar.json, action-button.json, action-group.json, alert-banner.json, alert-dialog.json, avatar.json, badge.json, body.json, bottom-navigation-android.json, breadcrumbs.json, button-group.json, and button.json.

File	Size	Type
action-bar.json	683 B	application/json
action-button.json	1.77 kB	application/json
action-group.json	1.68 kB	application/json
alert-banner.json	894 B	application/json
alert-dialog.json	1.2 kB	application/json
avatar.json	840 B	application/json
badge.json	1.35 kB	application/json
body.json	882 B	application/json
bottom-navigation-android.json	1.04 kB	application/json
breadcrumbs.json	629 B	application/json
button-group.json	807 B	application/json
button.json	1.69 kB	application/json

Component Options API

Schema

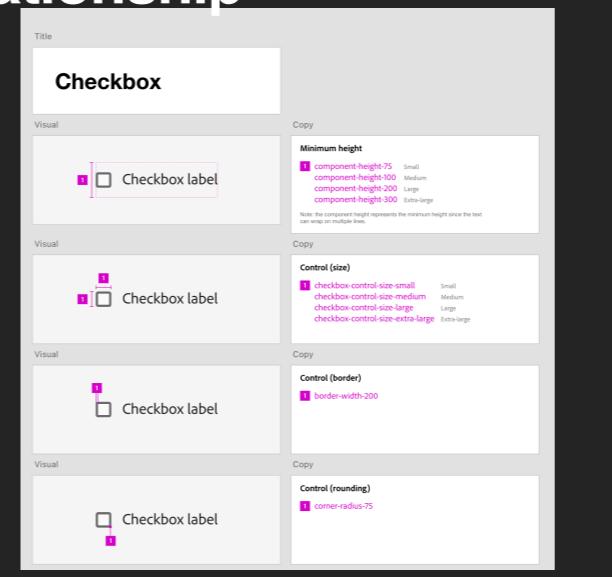
- Now
 - All component options have been codified
 - Static website with the tables of options generated from schema
- Next
 - Verify against spec files
- Eventually
 - Authoring workflow

Component Token Relationship

Component Token Relationship

Current definition of tokens in components

- Stored in spec files



Component Token Relationship

Component Token schema

- Human readable
- Codified, consumable
- Validation
- Reduced repetition
- Expandable
 - States



```
{  
  component: "button",  
  tokenId: "accent-background-color-default",  
  property: "background-color",  
  componentOptions: {  
    variant: "accent"  
  }  
}
```

Component Token Relationship

Component Token schema

```
● ● ●  
{  
  component: "button",  
  tokenId: "accent-background-color-default",  
  property: "background-color",  
  componentOptions: {  
    state: "default",  
    variant: "accent",  
    staticColor: null,  
    style: "fill",  
    size: "m",  
    justified: false,  
    isPending: false,  
    isDisabled: false  
  }  
}
```

Component Token Relationship

Component Token schema

- Potential shortcomings
 - Harder to author
 - tech-specific requirements



```
{  
  component: "button",  
  tokenId: "accent-background-color-default",  
  property: "background-color",  
  componentOptions: {  
    variant: "accent"  
  }  
}
```

Component Token Relationship

Component Token schema

- Now
 - Foundations in progress
- Next
 - Work on this last piece
- Eventually
 - Build Figma workflow to find all tokens used in each component