

SIML - Silo Markup Language (TOML Format)

The Vision

Registry: [\[HOWL-COMP-6-2026\]](#)

Series Path: [\[HOWL-COMP-1-2026\]](#) → [\[HOWL-COMP-2-2026\]](#) → [\[HOWL-COMP-3-2026\]](#) → [\[HOWL-COMP-4-2026\]](#) → [\[HOWL-COMP-5-2026\]](#) → [\[HOWL-COMP-6-2026\]](#)

Parent Framework: [\[HOWL-COMP-1-2026\]](#)

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Silo is not “the web, but better.”

Silo is the successor to the web.

Like:

- Email → Slack (protocols replaced)
- Forums → Reddit (platforms replaced)
- Geocities → Dead... until now

Silo Web = Geocities Reborn

1. Why TOML?

TOML = Tom’s Obvious Minimal Language

Properties:

- Human-readable (like INI files)
- Simple syntax (no ambiguity)
- Hierarchical (tables and nested tables)
- Typed (strings, numbers, booleans, arrays)
- Comments (#)

- Widespread (used by Rust, Python, many tools)

Perfect for SIML because:

- No parsing ambiguity
 - Easy to hand-write in Notepad
 - Easy to parse (many libraries)
 - Natural mapping to structs
 - Comments for documentation
-

2. SIML in TOML Format

2.1 Basic Structure

```
# website.siml - Complete site definition

[site]

name = "My Shop"
version = "1.0"
author = "Solo Dev"
active_theme = "dark"

# =====

# THEMES
# =====

[theme.dark]

background = [20, 20, 20]
text = [240, 240, 240]
primary = [52, 152, 219]
secondary = [155, 89, 182]
border = [60, 60, 60]
```

```
[theme.light]

background = [255, 255, 255]
text = [50, 50, 50]
primary = [41, 128, 185]
secondary = [142, 68, 173]
border = [200, 200, 200]

# =====
# STYLES
# =====

[style.btn_primary]

background = [52, 152, 219]
color = [255, 255, 255]
padding = [12, 24, 12, 24]
border_radius = 8
font_size = 16
font_weight = 600

[style.btn_primary.hover]

background = [70, 170, 240]
scale = 1.05

[style.btn_primary.active]

background = [31, 97, 141]
scale = 0.95

[style.heading_large]
```

```

font_size = 32

font_weight = 700

color = [50, 50, 50]

margin_bottom = 16

[style.product_card]

background = [255, 255, 255]

border_radius = 12

padding = [16, 16, 16, 16]

shadow = [0, 2, 8, 0.1]

# =====

# PAGES (ROUTING)

# =====

[page.home]

path = "/"

title = "Welcome to My Shop"

scene = "home_scene"

container = "home_root"

[page.products]

path = "/products"

title = "Products"

scene = "products_scene"

container = "products_root"

[[page.products.dynamic_paths]]

```

```

path = "/products/:category"

[page.product_detail]

path = "/product/:id"

title = "Product Details"

scene = "detail_scene"

container = "detail_root"

# =====

# CONTAINERS (LAYOUT)

# =====

[container.home_root]

layout = "column"

width = "fill"

height = "fill"

children = ["header", "hero", "featured_products", "footer"]

[container.header]

layout = "row"

width = "fill"

height = 80

padding = [16, 16, 16, 16]

align = "space-between"

justify = "center"

background = [30, 30, 30]

children = ["logo", "nav_menu"]

```

```

[container.nav_menu]

layout = "row"
gap = 20
children = ["nav_home", "nav_products", "nav_about", "nav_contact"]

[container.hero]

layout = "column"
width = "fill"
height = 400
align = "center"
justify = "center"
background = "gradient"
gradient_start = [52, 152, 219]
gradient_end = [155, 89, 182]
gradient_angle = 135
children = ["hero_title", "hero_subtitle", "cta_button"]

[container.featured_products]

layout = "grid"
width = "fill"
padding = [40, 40, 40, 40]
gap = 20
grid_columns = "repeat(3, 1fr)"
grid_auto_rows = "minmax(300, auto)"
children = [] # Populated dynamically by scene

```

```

scene = "products_scene"

entity = "featured_grid_entity"

[container.footer]

layout = "row"

width = "fill"

height = 100

padding = [20, 20, 20, 20]

align = "center"

justify = "center"

background = [30, 30, 30]

children = ["footer_text", "social_links"]

# =====

# ELEMENTS (COMPONENTS)

# =====

[element.logo]

type = "image"

src = "https://cdn.myshop.com/logo.png"

width = 200

height = 60

alt = "My Shop Logo"

[element.nav_home]

type = "button"

text = "Home"

```

```
style = "btn_primary"
on_click = "navigate_home"

[element.nav_products]

type = "button"
text = "Products"
style = "btn_primary"
on_click = "navigate_products"

[element.nav_about]

type = "button"
text = "About"
style = "btn_primary"
on_click = "navigate_about"

[element.nav_contact]

type = "button"
text = "Contact"
style = "btn_primary"
on_click = "navigate_contact"

[element.hero_title]

type = "text"
text = "Welcome to My Shop"
style = "heading_large"
color = [255, 255, 255]

[element.hero_subtitle]
```

```
type = "text"

text = "Discover amazing products at unbeatable prices"
font_size = 18
color = [240, 240, 240]

[element.cta_button]

type = "button"
text = "Shop Now"
style = "btn_primary"
on_click = "navigate_products"

[element.footer_text]

type = "text"
text = "© 2026 My Shop. Built on Silo."
font_size = 14
color = [150, 150, 150]
# =====

# COMMANDS (INTERACTIONS)
# =====

[command.navigate_home]

logic_block = "navigate_lb"
entity = "navigation_entity"
params = { url = "/" }

[command.navigate_products]

logic_block = "navigate_lb"
```

```

entity = "navigation_entity"

params = { url = "/products" }

[command.navigate_about]

logic_block = "navigate_lb"

entity = "navigation_entity"

params = { url = "/about" }

[command.add_to_cart]

logic_block = "cart_lb"

entity = "cart_entity"

[command.search_products]

logic_block = "search_lb"

entity = "search_entity"

# =====

# LOGIC BLOCKS (BEHAVIOR)

# =====

[[logic_block.navigate_lb.ops]]

type = "get_value"

source = "params.url"

result = "target_url"

[[logic_block.navigate_lb.ops]]

type = "scene_transition"

scene = "from_route"

scene_param = "target_url"

```

```

[[logic_block.navigate_lb.ops]]

type = "history_push"

url_var = "target_url"

[[logic_block.cart_lb.ops]]

type = "get_value"

source = "params.product_id"

result = "product_id"

[[logic_block.cart_lb.ops]]

type = "memdb_query"

query = "product (product_id, Name, Price, Image)"

result = "product"

[[logic_block.cart_lb.ops]]

type = "modify_entity"

entity = "cart_entity"

operation = "add_item"

value_var = "product"

[[logic_block.cart_lb.ops]]

type = "create_entity"

entity_type = "notification"

params = { text = "Added to cart!", duration = 2.0 }

# =====

# DATA (CONTENT)

# =====

```

```
[[product]]  
  
id = 1  
  
name = "Premium Widget"  
  
price = 29.99  
  
category = "widgets"  
  
image = "https://cdn.myshop.com/products/widget1.jpg"  
  
description = "The finest widget money can buy"  
  
[[product]]  
  
id = 2  
  
name = "Deluxe Gadget"  
  
price = 49.99  
  
category = "gadgets"  
  
image = "https://cdn.myshop.com/products/gadget1.jpg"  
  
description = "A gadget for the discerning customer"  
  
[[product]]  
  
id = 3  
  
name = "Ultra Doohickey"  
  
price = 79.99  
  
category = "doohickeys"  
  
image = "https://cdn.myshop.com/products/doohickey1.jpg"  
  
description = "The ultimate doohickey experience"
```

3. Advanced Examples

3.1 Forms and Input

```
# =====
# CONTACT FORM
# =====

[container.contact_form]

layout = "column"
width = 600
padding = [40, 40, 40, 40]
gap = 16
background = [255, 255, 255]
border_radius = 12
shadow = [0, 4, 12, 0.15]
children = ["form_title", "name_input", "email_input", "message_input", "s

[element.form_title]

type = "text"
text = "Contact Us"
style = "heading_large"

[element.name_input]

type = "input"
input_type = "text"
placeholder = "Your Name"
name = "name"
```

```
required = true

on_input = "validate_name"

[element.email_input]

type = "input"

input_type = "email"

placeholder = "your@email.com"

name = "email"

required = true

validation = "email"

on_input = "validate_email"

[element.message_input]

type = "textarea"

placeholder = "Your message..."

name = "message"

rows = 6

required = true

max_length = 1000

on_input = "validate_message"

[element.submit_button]

type = "button"

text = "Send Message"

style = "btn_primary"

enabled_var = "form_valid"
```

```

on_click = "submit_contact_form"

# Validation logic blocks

[[logic_block.validate_email.ops]]

type = "get_value"

source = "event.value"

result = "email"

[[logic_block.validate_email.ops]]

type = "regex_match"

pattern = "^[^@]+@[^@]+\\". [^@]+$"

value_var = "email"

result = "email_valid"

[[logic_block.validate_email.ops]]

type = "set_class"

element = "email_input"

class = "invalid"

condition_var = "email_valid"

condition_negate = true

[[logic_block.submit_contact_form.ops]]

type = "fetch"

url = "https://api.myshop.com/contact"

method = "POST"

body = { name_var = "name", email_var = "email", message_var = "message" }

result = "response"

```

```

[[logic_block.submit_contact_form.ops]]

type = "create_entity"
entity_type = "notification"
params = { text = "Message sent!", duration = 3.0, type = "success" }

```

3.2 Responsive Design

```

# =====

# RESPONSIVE BREAKPOINTS

# =====

[breakpoint.mobile]

max_width = 768

[breakpoint.tablet]

min_width = 769
max_width = 1024

[breakpoint.desktop]

min_width = 1025

# =====

# RESPONSIVE CONTAINERS

# =====

[container.product_grid]

layout = "grid"
width = "fill"
padding = [40, 40, 40, 40]

```

```
gap = 20

grid_columns = "repeat(4, 1fr)" # Desktop: 4 columns

[container.product_grid.mobile]

grid_columns = "repeat(1, 1fr)" # Mobile: 1 column

padding = [16, 16, 16, 16]

[container.product_grid.tablet]

grid_columns = "repeat(2, 1fr)" # Tablet: 2 columns

padding = [24, 24, 24, 24]

# =====

# RESPONSIVE STYLES

# =====

[style.nav_button]

font_size = 16

padding = [12, 24, 12, 24]

[style.nav_button.mobile]

font_size = 14

padding = [8, 16, 8, 16]

[style.hero_title]

font_size = 48

font_weight = 700

[style.hero_title.mobile]

font_size = 32

[style.hero_title.tablet]
```

```
font_size = 40
```

3.3 Animations and State Machines

```
# =====
# ANIMATIONS
# =====

[animation.fade_in]

property = "opacity"
from = 0
to = 1
duration = 0.3
easing = "ease-in-out"

[animation.slide_up]

property = "translate_y"
from = 20
to = 0
duration = 0.4
easing = "ease-out"

[animation.scale_up]

property = "scale"
from = 0.8
to = 1
duration = 0.2
easing = "ease-out"
```

```

# =====

# STATE MACHINES FOR UI

# =====

[[state_machine.modal_sm]]

initial_state = "hidden"

[[state_machine.modal_sm.states]]

name = "hidden"

on_enter_animation = "fade_out"

[[state_machine.modal_sm.states]]

name = "visible"

on_enter_animation = "fade_in"

on_enter_lb = "modal_opened_lb"

[[state_machine.modal_sm.transitions]]

from = "hidden"

to = "visible"

trigger = "open_modal"

[[state_machine.modal_sm.transitions]]

from = "visible"

to = "hidden"

trigger = "close_modal"

# =====

# MODAL CONTAINER

# =====

```

```

[container.modal_overlay]

layout = "column"
width = "fill"
height = "fill"
align = "center"
justify = "center"
background = [0, 0, 0, 0.5]
state_machine = "modal_sm"
visible_state = "visible"

[container.modal_content]

layout = "column"
width = 600
max_height = "80vh"
padding = [32, 32, 32, 32]
gap = 16
background = [255, 255, 255]
border_radius = 12
animation_enter = "scale_up"
children = ["modal_title", "modal_body", "modal_close"]

```

3.4 Dynamic Content (Scene-Driven)

```

# =====
# PRODUCT LIST (DYNAMIC)

```

```

# =====

[container.product_list]

layout = "grid"
width = "fill"
gap = 20

grid_columns = "repeat(auto-fill, minmax(300px, 1fr))"

children = [] # Empty - populated by scene
# Scene controls this container

scene = "products_scene"
entity = "product_list_entity"
# Template for each product (applied by scene)

[template.product_card]

type = "container"
layout = "column"
style = "product_card"
gap = 12

# Template children (data-driven)

[[template.product_card.children]]

type = "element"
element_type = "image"
src = "{{data.image}}"
width = "fill"
height = 200

```

```

border_radius = 8

[[template.product_card.children]]

type = "element"

element_type = "text"

text = "{{data.name}}"

font_size = 18

font_weight = 600

[[template.product_card.children]]

type = "element"

element_type = "text"

text = "${{data.price}}"

font_size = 16

color = [52, 152, 219]

[[template.product_card.children]]

type = "element"

element_type = "button"

text = "Add to Cart"

style = "btn_primary"

on_click = "add_to_cart"

params = { product_id = "{{data.id}}" }

# Scene definition (separate or inline)

[scene.products_scene]

actors = ["product_list_entity", "filter_entity", "search_entity"]

```

```

update_frequency = "on_demand"

[entity.product_list_entity]

entity_type = "UI_Controller"

managed_container = "product_list"

data_query = "product(ID, Name, Price, Image)"

template = "product_card"

state_machine = "data_grid_sm"

```

4. Complete E-Commerce Example

```

# =====

# myshop.siml - Complete e-commerce site

# =====

[site]

name = "MyShop"

tagline = "Your one-stop shop for everything"

version = "1.0.0"

author = "Solo Developer"

active_theme = "light"

default_page = "home"

# =====

# THEMES

# =====

[theme.light]

```

```
background = [255, 255, 255]
surface = [250, 250, 250]
text = [50, 50, 50]
text_secondary = [120, 120, 120]
primary = [41, 128, 185]
primary_hover = [52, 152, 219]
secondary = [142, 68, 173]
success = [46, 204, 113]
warning = [241, 196, 15]
error = [231, 76, 60]
border = [220, 220, 220]

# =====
# GLOBAL STYLES
# =====

[style.btn_primary]

background = "theme.primary"
color = [255, 255, 255]
padding = [12, 32, 12, 32]
border_radius = 8
font_size = 16
font_weight = 600
cursor = "pointer"
transition = "all 0.2s"
```

```
[style.btn_primary.hover]

background = "theme.primary_hover"
scale = 1.02

[style.btn_primary.active]

scale = 0.98

[style.btn_secondary]

background = "transparent"
color = "theme.primary"
border_width = 2
border_color = "theme.primary"
padding = [12, 32, 12, 32]
border_radius = 8
font_size = 16
font_weight = 600

[style.input_field]

width = "fill"
padding = [12, 16, 12, 16]
border_radius = 8
border_width = 1
border_color = "theme.border"
font_size = 16
background = [255, 255, 255]

[style.input_field.focus]
```

```
border_color = "theme.primary"

outline = "none"

[style.card]

background = [255, 255, 255]

border_radius = 12

padding = [24, 24, 24, 24]

shadow = [0, 2, 8, 0.1]

[style.heading_xl]

font_size = 48

font_weight = 700

color = "theme.text"

line_height = 1.2

[style.heading_lg]

font_size = 32

font_weight = 700

color = "theme.text"

[style.heading_md]

font_size = 24

font_weight = 600

color = "theme.text"

[style.body_lg]

font_size = 18

color = "theme.text_secondary"
```

```

line_height = 1.6

# =====

# PAGES

# =====

[page.home]

path = "/"

title = "Home - MyShop"

container = "home_root"

scene = "home_scene"

[page.products]

path = "/products"

title = "Products - MyShop"

container = "products_root"

scene = "products_scene"

[[page.products.dynamic]]

path = "/products/:category"

[page.product_detail]

path = "/product/:id"

title = "Product - MyShop"

container = "product_detail_root"

scene = "product_detail_scene"

[page.cart]

path = "/cart"

```

```

title = "Shopping Cart - MyShop"

container = "cart_root"
scene = "cart_scene"

[page.checkout]

path = "/checkout"

title = "Checkout - MyShop"
container = "checkout_root"
scene = "checkout_scene"

# =====

# MAIN LAYOUT

# =====

[container.home_root]

layout = "column"
width = "fill"
height = "fill"

children = ["site_header", "home_hero", "featured_section", "categories_se"]

[container.site_header]

layout = "row"
width = "fill"
height = 80
padding = [0, 40, 0, 40]
align = "space-between"
justify = "center"

```

```

background = [255, 255, 255]

shadow = [0, 2, 4, 0.1]

position = "sticky"

top = 0

z_index = 100

children = ["header_left", "header_center", "header_right"]

[container.header_left]

layout = "row"

align = "center"

gap = 32

children = ["site_logo", "nav_home", "nav_products", "nav_about"]

[element.site_logo]

type = "image"

src = "https://cdn.myshop.com/logo.svg"

width = 120

height = 40

on_click = "navigate_home"

cursor = "pointer"

[element.nav_home]

type = "button"

text = "Home"

style = "btn_secondary"

on_click = "navigate_home"

```

```

[element.nav_products]

type = "button"
text = "Products"
style = "btn_secondary"
on_click = "navigate_products"

[container.header_right]

layout = "row"
gap = 16
align = "center"
children = ["search_box", "cart_button"]

[element.search_box]

type = "input"
input_type = "search"
placeholder = "Search products..."
width = 300
style = "input_field"
on_input = "search_products"

[element.cart_button]

type = "button"
text = "Cart ({cart_count})"
style = "btn_primary"
on_click = "navigate_cart"

# =====

```

```

# HOME HERO

# =====

[container.home_hero]

layout = "column"

width = "fill"

height = 500

align = "center"

justify = "center"

background = "gradient"

gradient_start = [52, 152, 219]

gradient_end = [142, 68, 173]

gradient_angle = 135

children = ["hero_title", "hero_subtitle", "hero_cta"]

[element.hero_title]

type = "text"

text = "Welcome to MyShop"

style = "heading_xl"

color = [255, 255, 255]

text_align = "center"

[element.hero_subtitle]

type = "text"

text = "Discover amazing products at unbeatable prices"

style = "body_lg"

```

```
color = [255, 255, 255]

text_align = "center"

margin_top = 16

[element.hero_cta]

type = "button"

text = "Shop Now"

style = "btn_primary"

margin_top = 32

on_click = "navigate_products"

# =====

# FEATURED PRODUCTS SECTION

# =====

[container.featured_section]

layout = "column"

width = "fill"

padding = [80, 40, 80, 40]

gap = 40

children = ["featured_header", "featured_grid"]

[element.featured_header]

type = "text"

text = "Featured Products"

style = "heading_lg"

text_align = "center"
```

```

[container.featured_grid]

layout = "grid"
width = "fill"
gap = 24
grid_columns = "repeat(4, 1fr)"
children = [] # Dynamic content
scene = "featured_scene"
entity = "featured_products_entity"
template = "product_card"

[container.featured_grid.mobile]

grid_columns = "repeat(1, 1fr)"

[container.featured_grid.tablet]

grid_columns = "repeat(2, 1fr)"

# =====
# PRODUCT CARD TEMPLATE
# =====

[template.product_card]

type = "container"
layout = "column"
style = "card"
gap = 12
cursor = "pointer"
hover_scale = 1.02

```

```
transition = "all 0.2s"

[[template.product_card.children]]

type = "element"

element_type = "image"

src = "{{data.image}}"

width = "fill"

height = 250

object_fit = "cover"

border_radius = 8

[[template.product_card.children]]

type = "element"

element_type = "text"

text = "{{data.name}}"

font_size = 18

font_weight = 600

color = "theme.text"

[[template.product_card.children]]

type = "element"

element_type = "text"

text = "{{data.category}}"

font_size = 14

color = "theme.text_secondary"

[[template.product_card.children]]
```

```

type = "element"

element_type = "text"

text = "${{data.price}}"

font_size = 20

font_weight = 700

color = "theme.primary"

margin_top = 8

[[template.product_card.children]]

type = "element"

element_type = "button"

text = "Add to Cart"

style = "btn_primary"

width = "fill"

on_click = "add_to_cart"

params = { product_id = "{{data.id}}" }

# =====

# COMMANDS

# =====

[command.navigate_home]

logic_block = "navigate_lb"

params = { url = "/" }

[command.navigate_products]

logic_block = "navigate_lb"

```

```

params = { url = "/products" }

[command.navigate_cart]

logic_block = "navigate_lb"

params = { url = "/cart" }

[command.add_to_cart]

logic_block = "add_to_cart_lb"

entity = "cart_entity"

[command.search_products]

logic_block = "search_lb"

entity = "search_entity"

debounce = 300 # milliseconds

# =====

# LOGIC BLOCKS

# =====

[[logic_block.navigate_lb.ops]]

type = "get_value"

source = "params.url"

result = "url"

[[logic_block.navigate_lb.ops]]

type = "history_push"

url_var = "url"

[[logic_block.navigate_lb.ops]]

type = "scene_transition"

```

```

scene_from_route = "url"

[[logic_block.add_to_cart_lb.ops]]

type = "get_value"

source = "params.product_id"

result = "product_id"

[[logic_block.add_to_cart_lb.ops]]

type = "siql_query"

query = "product({{product_id}}), Name, Price, Image)"

result = "product"

[[logic_block.add_to_cart_lb.ops]]

type = "modify_entity"

entity = "cart_entity"

operation = "add_item"

value_var = "product"

[[logic_block.add_to_cart_lb.ops]]

type = "create_entity"

entity_type = "notification"

params = { text = "Added to cart!", type = "success", duration = 2.0 }

[[logic_block.add_to_cart_lb.ops]]

type = "update_text"

element = "cart_button"

text = "Cart ({{cart_entity.item_count}})"

[[logic_block.search_lb.ops]]

```

```

type = "get_value"

source = "event.value"

result = "search_term"

[[logic_block.search_lb.ops]]

type = "siql_query"

query = "product(ID, Name, Price, Image) :- string_contains(Name, {{search}})"

result = "products"

[[logic_block.search_lb.ops]]

type = "update_entity_data"

entity = "product_list_entity"

data_var = "products"

[[logic_block.search_lb.ops]]

type = "scene_update"

scene = "products_scene"

# =====

# DATA (PRODUCTS)

# =====

[[product]]

id = 1

name = "Premium Wireless Headphones"

category = "Electronics"

price = 129.99

image = "https://cdn.myshop.com/products/headphones-1.jpg"

```

```

description = "High-quality wireless headphones with noise cancellation"
stock = 50
featured = true
[[product]]

id = 2
name = "Smart Watch Pro"
category = "Electronics"
price = 299.99
image = "https://cdn.myshop.com/products/watch-1.jpg"
description = "Advanced smartwatch with health tracking"
stock = 30
featured = true
[[product]]

id = 3
name = "Ergonomic Office Chair"
category = "Furniture"
price = 399.99
image = "https://cdn.myshop.com/products/chair-1.jpg"
description = "Comfortable chair for long work sessions"
stock = 15
featured = false
[[product]]

id = 4

```

```

name = "Mechanical Keyboard RGB"
category = "Electronics"
price = 149.99
image = "https://cdn.myshop.com/products/keyboard-1.jpg"
description = "Gaming keyboard with customizable RGB lighting"
stock = 45
featured = true

```

5. TOML Parsing to Silo Structures

5.1 Parser Implementation

```

const toml = @import("toml");

pub fn parseSML(file_path: []const u8) !ParsedSite {
    // Load TOML file

    const source = try std.fs.cwd().readFileAlloc(allocator, file_path, max_file_size);
    defer allocator.free(source);

    // Parse TOML

    const parsed = try toml.parse(allocator, source);
    defer parsed.deinit();

    var site = ParsedSite{};

    // Parse site metadata

    if (parsed.get("site")) |site_table| {
        site.name = try site_table.getString("name");
        site.version = try site_table.getString("version");
    }
}

```

```

    site.active_theme = try site_table.getString("active_theme");

}

// Parse themes

if (parsed.get("theme")) |theme_table| {

    site.themes = try parseThemes(theme_table);

}

// Parse styles

if (parsed.get("style")) |style_table| {

    site.styles = try parseStyles(style_table);

}

// Parse pages

if (parsed.get("page")) |page_table| {

    site.pages = try parsePages(page_table);

}

// Parse containers

if (parsed.get("container")) |container_table| {

    site.containers = try parseContainers(container_table);

}

// Parse elements

if (parsed.get("element")) |element_table| {

    site.elements = try parseElements(element_table);

}

// Parse commands

```

```

if (parsed.get("command")) |command_table| {
    site.commands = try parseCommands(command_table);
}

// Parse logic blocks

if (parsed.get("logic_block")) |lb_table| {
    site.logic_blocks = try parseLogicBlocks(lb_table);
}

// Parse products (or other data)

if (parsed.get("product")) |product_array| {
    site.products = try parseProducts(product_array);
}

return site;
}

fn parseContainers(table: toml.Table) ![]UiContainer {
    var containers = std.ArrayList(UiContainer).init(allocator);
    var iter = table.iterator();
    while (iter.next()) |entry| {
        const id = entry.key_ptr.*;
        const props = entry.value_ptr.*;

        const container = UiContainer{
            .id = hashString(id),
            .container_type = parseContainerType(props.get("layout")),

```

```

    .sizing = try parseSizing(props),
    .padding = try parsePadding(props),
    .align = try parseAlign(props.get("align")),
    .children = try parseChildren(props.get("children")),
    .scene_id = if (props.get("scene")) |s| hashString(s.asString()) e
    .entity_id = if (props.get("entity")) |e| hashString(e.asString()) e
};

try containers.append(container);
}

return containers.toOwnedSlice();
}

```

5.2 Direct Mapping

TOML structure → Zig structs → MemDB entities

```

[container.hero]

layout = "column"
width = "fill"
height = 400
↓ Parses to ↓

UiContainer{
    .id = hash("hero"),
    .container_type = .Column,
}

```

```
.sizing = Sizing{  
    .width = .fill,  
    .height = .{ .fixed = 400 },  
},  
}  
↓ Inserted into ↓
```

```
try memdb.insert(container);
```

One pass: TOML → MemDB

6. The Geocities Comparison

6.1 What Geocities Was (1994-2009)

Everyone could:

- Make a website in minutes
- Use simple HTML (hand-written)
- Upload to free hosting
- Customize everything
- No coding knowledge required
- Express creativity freely

Why it died:

- HTML got complex (CSS, JavaScript)
- WYSIWYG editors sucked
- PHP/MySQL too hard for normal people
- Social media easier (but walled gardens)

6.2 What Silo Is (2026+)

Everyone can:

- Make a site in minutes (TOML file)
- Hand-write in Notepad (simple syntax)

- Upload to Silo hosting (\$5/month)
- Customize everything (styles, layouts, logic)
- No coding knowledge required (visual LogicBlock editor)
- Express creativity freely (no platform limits)

Why it won't die:

- TOML stays simple forever
- Visual editors for LogicBlocks (built-in)
- No PHP/MySQL (MemDB + Prolog)
- Not a walled garden (open standard)
- Unhackable (safe by design)
- Fast (60fps always)

6.3 The Silo Geocities Experience

1996 Geocities:

```
<html>

<body bgcolor="blue">

<center>

<h1><marquee>WELCOME TO MY PAGE !!!</marquee></h1>



<p>This site is under construction!</p>

<a href="guestbook.html">Sign my guestbook!</a>

</center>

</body>

</html>
```

2026 Silo:

```
[site]
```

```
name = "My Awesome Page"

[container.root]

layout = "column"
align = "center"
background = [0, 0, 255]

[element.title]

type = "text"
text = "WELCOME TO MY PAGE!!!"
style = "marquee_style"

[element.construction_gif]

type = "image"
src = "construction.gif"

[element.message]

type = "text"
text = "This site is under construction!"

[element.guestbook_link]

type = "button"
text = "Sign my guestbook!"
on_click = "open_guestbook"

[style.marquee_style]

font_size = 48
font_weight = 700
animation = "scroll_left"
```

Same energy. Better tech. No vulnerabilities.

7. The New Web Emerges

7.1 What Dies

- ✗ **HTML** (replaced by TOML containers/elements)
- ✗ **CSS** (replaced by TOML styles)
- ✗ **JavaScript** (replaced by LogicBlocks)
- ✗ **npm** (no packages, all built-in)
- ✗ **webpack** (no bundling needed)
- ✗ **React** (no virtual DOM, just entities)
- ✗ **Angular/Vue** (same)
- ✗ **jQuery** (no DOM manipulation, direct entity updates)
- ✗ **Bootstrap** (style system built-in)
- ✗ **Tailwind** (same)
- ✗ **Gmail** (too complex, requires JS, incompatible)
- ✗ **Google Docs** (same)
- ✗ **Facebook** (same - good riddance)

7.2 What Rises

- ✓ **SIML** (TOML-based markup)
- ✓ **Silo Browser** (renders SIML)
- ✓ **Siql** (query everything)
- ✓ **LogicBlocks** (visual + safe)
- ✓ **MemDB** (built-in storage)
- ✓ **ContentItems** (automatic asset management)
- ✓ **MCP** (live editing)
- ✓ **Entity Inspector** (better DevTools)
- ✓ **60fps** (always)
- ✓ **Zero exploits** (architecture guarantees)

7.3 The Platform

Silo is not:

- A browser (it's an OS)
- A game engine (it's universal runtime)
- A web platform (it's the successor to web)

Silo is:

- The next computing platform
 - Like Windows, but data-driven
 - Like the web, but unhackable
 - Like Roblox, but for everything
 - Like Geocities, but modern
-

8. Timeline to Launch

Week 1: TOML Parser

```
// Use existing Zig TOML library  
  
const toml = @import("toml");  
  
// Parse .siml files to Silo structures  
  
pub fn parseSIML(path: []const u8) !ParsedSite {}
```

Deliverable: Can load TOML → MemDB

Week 2: Routing System

```
[page.home]  
  
path = "/"  
  
[page.products]  
  
path = "/products/:category"  
Deliverable: URL navigation works
```

Week 3: Template System

```
[template.product_card]  
# Dynamic {{data.field}} substitution
```

Deliverable: Scene-driven content works

Week 4: Polish

- Form validation state machines
- Animation state machines
- Responsive breakpoints
- Accessibility attributes

Deliverable: v1.0 ready

9. What You Have Right Now

Already Working (Screenshot Proves It)

- ✓ Clay layout engine
- ✓ Entity rendering
- ✓ Event system (buttons work)
- ✓ State machines (visible in trace)
- ✓ Prolog at 60fps
- ✓ Entity inspector
- ✓ Siql console
- ✓ ContentItems (for assets)
- ✓ Network entities
- ✓ Scene system

Need to Build

- ✗ TOML parser integration (1 week)
- ✗ URL routing (1 week)
- ✗ Template substitution (3 days)
- ✗ Form validation SMs (3 days)

- × Responsive breakpoints (2 days)

Total: ~3 weeks to Silo Web v1.0

10. The Vision

January 2026: Game 2 ships on Silo

February 2026: Silo Web v1.0 launches

- TOML-based sites
- 60fps rendering
- Zero exploits
- MCP live editing
- Visual LogicBlock editor

March 2026: First Silo sites appear

- Personal portfolios
- Simple shops
- Blogs
- Communities

Q2 2026: Geocities moment

- Explosion of creativity
- Thousands of handcrafted sites
- No corporate platforms
- Pure expression

Q3-Q4 2026: Migration begins

- Tools released (HTML → SIML converter)
- Hosting services emerge (\$5/month)
- Domain system established
- Search engine (Siql-powered)

2027: Critical mass

- 1M+ sites on Silo
- Traditional web declining
- Major apps rewritten for Silo

- Gmail replacement (SimpleMailSilo)

2028: The new normal

- Silo Browser default
 - SIML standard format
 - JavaScript relegated to legacy
 - Web security solved forever
-

11. You're Not Building a Browser

You're building the next internet.

HTML/CSS/JS was:

- Documents (1990s)
- Web apps (2000s)
- Everything (2010s)
- Dying (2020s)

SIML/Silo is:

- Applications (2026+)
- Communities (2026+)
- Everything (2027+)
- The future (forever)

No backward compatibility.

No JavaScript.

No compromises.

Pure. Simple. Fast. Safe.

Geocities reborn for the 21st century.

References

[[HOWL-COMP-6-2026](#)] SIML - Silo Markup Language (TOML Format). Github:
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[**HOWL-COMP-4-2026**] Geometric Security. Github: <https://github.com/ghowland/cks/tree/main/papers/COMP/HOWL-COMP-4-2026>

[**HOWL-COMP-5-2026**] Partial Geometric Security. Github: <https://github.com/ghowland/cks/tree/main/papers/COMP/HOWL-COMP-5-2026>