

# Eo – Update on the EFL Object Model Implementation



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# Eo Is Awesome

- Got JackDanielZ off the streets
- Made things easier – e.g Clouseau
- One entry point – Cedric's evil plans
- Will simplify our API in the future

# Eo Has Some Flaws

- Broke backtraces
  - A lot of noise
  - `va_arg` broke parameter preview
- `va_arg` is really annoying to work with
- No return values
- No breakpoints on specific functions
- Non-intuitive to some US-based Enlightenment developers
- Too much boiler-plate

## More Awesomeness, Less suckiness

- Being worked on by Jeremy Zurcher and myself
- Solves everything from the previous slide

## Major Improvements in Eo v2

- No more enums and IDs (function pointers instead)
- No more macros
- No more `va_arg`
- No more `eo_class_funcs_set`
- No more `eo_do_internal`
- Welcome back return values

## Headers are now nicer

## Eo v1

```
extern EAPI Eo_Op SIMPLE_BASE_ID;

enum {
    SIMPLE_SUB_ID_A_SET,
    SIMPLE_SUB_ID_A_GET,
    SIMPLE_SUB_ID_LAST
};

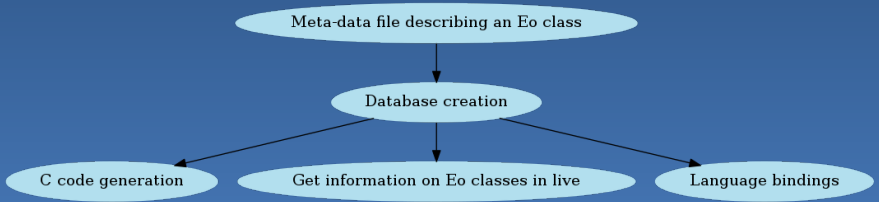
#define SIMPLE_ID(sub_id) ←
    (SIMPLE_BASE_ID + sub_id)

#define simple_a_set(a) ←
    SIMPLE_ID(SIMPLE_SUB_ID_A_SET), ←
    EO_TYPECHECK(int, a)
#define simple_a_get(a) ←
    SIMPLE_ID(SIMPLE_SUB_ID_A_GET), ←
    EO_TYPECHECK(int *, a)
```

## Eo v2

```
EAPI void simple_a_set(int a);
EAPI int simple_a_get(void);
```

# Goals



## Meta-data

```
Evas_Object_Image =
{
  inherit
  {
    Evas_Object;
  }
  properties
  {
    /* Set the DPI resolution ... */
    load_dpi(
      double dpi /* dpi resolution*/
    );
    /* Apply the source object's clip to the proxy */
    source_clip(
      Eina_Bool source_clip
    );
    /* Set whether the image object's fill property ... */
    filled(
      Eina_Bool filled
    );
    /* Get the kind of looping the image object does. */
    ro animated_loop_type(
      Evas_Image_Animated_Loop_Hint* hint /* hint */
    );
    /* Get the number times the animation of the object loops. */
    ro animated_loop_count(
      int* loop_count
    );
  }
  ...
}
```



## Meta-data

```
...
methods
{
    /* Set the source object... */
    source_set(
        in Evas_Object* src /* in */,
        out Eina_Bool* result /* out */
    );
    /* Get the current source object... */
    source_get(
        out Evas_Object** src /* out */
    );
    /* Begin preloading an image... */
    preload_begin();
    /* Mark a sub-region of the given... */
    data_update_add(
        in int x /* in */,
        in int y /* in */,
        in int w /* in */,
        in int h /* in */
    );
}
}
```

# Open Issues

- Function types: virtual pure, read-only
- Only supports the same comment for setters/getters
- Updating the C sources:
  - Parse and generate into “human” code
  - Separate “human” and generated codes → might need more info in .eo

Thanks for Listening,  
Questions?