



Improving Decompiler Widget



About me

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Highlights

1. Creating a standard decompiler interface for radare2 and Cutter
2. Improving r2ghidra-dec to annotate decompiled code
3. Dedicated decompiler context menu
4. Improvements to make the decompiler more responsive and stable
5. Couple of things unrelated to the decompiler

Standard Decompiler Interface

Shifted RAnnotatedCode API to radare2 from r2ghidra-dec

Made API for context-sensitive annotations in
RAnnotatedCode

RAnnotatedCode

```
typedef struct r_annotated_code_t {  
    char *code; /**< Decompiled code. RAnnotatedCode owns this string and it must free it. */  
    RVector annotations; /**< RVector <RCodeAnnotation> contains the list of annotations for the  
decompiled code. */  
} RAnnotatedCode;
```

```
typedef enum r_code_annotation_type_t {  
    R_CODE_ANNOTATION_TYPE_OFFSET,  
    R_CODE_ANNOTATION_TYPE_SYNTAX_HIGHLIGHT,  
    R_CODE_ANNOTATION_TYPE_FUNCTION_NAME,  
    R_CODE_ANNOTATION_TYPE_GLOBAL_VARIABLE,  
    R_CODE_ANNOTATION_TYPE_CONSTANT_VARIABLE,  
    R_CODE_ANNOTATION_TYPE_LOCAL_VARIABLE,  
    R_CODE_ANNOTATION_TYPE_FUNCTION_PARAMETER,  
} RCodeAnnotationType;
```

Function names, global variables, and constant variables

```
struct {  
    ut64 offset;  
    char *name;  
} reference;
```

Local variables and function parameters

```
struct {  
    char *name;  
} variable;
```

JSON representation

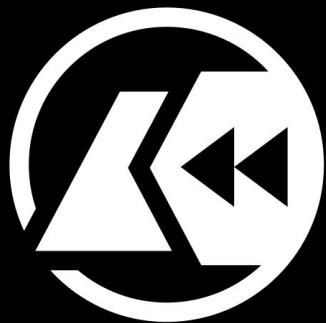
```
{  
  "start": 545,  
  "end": 558,  
  "type": "function_name",  
  "name": "sym.Aeropause",  
  "offset": 4199038  
},
```

```
{  
  "start": 538,  
  "end": 546,  
  "type": "global_variable",  
  "offset": 4218928  
},
```

```
{  
  "start": 394,  
  "end": 400,  
  "type": "constant_variable",  
  "offset": 134520889  
},
```

```
{  
  "start": 95,  
  "end": 105,  
  "type": "local_variable",  
  "name": "countLimit"  
},
```

```
{  
  "start": 26,  
  "end": 31,  
  "type": "function_parameter",  
  "name": "edges"  
},
```



INTRODUCING THE NEW DECOMPILER



Special Thanks

Itay Cohen

Kārlis

Florian Märkl



Thanks for watching