

Meta-Level Compilation and SSC

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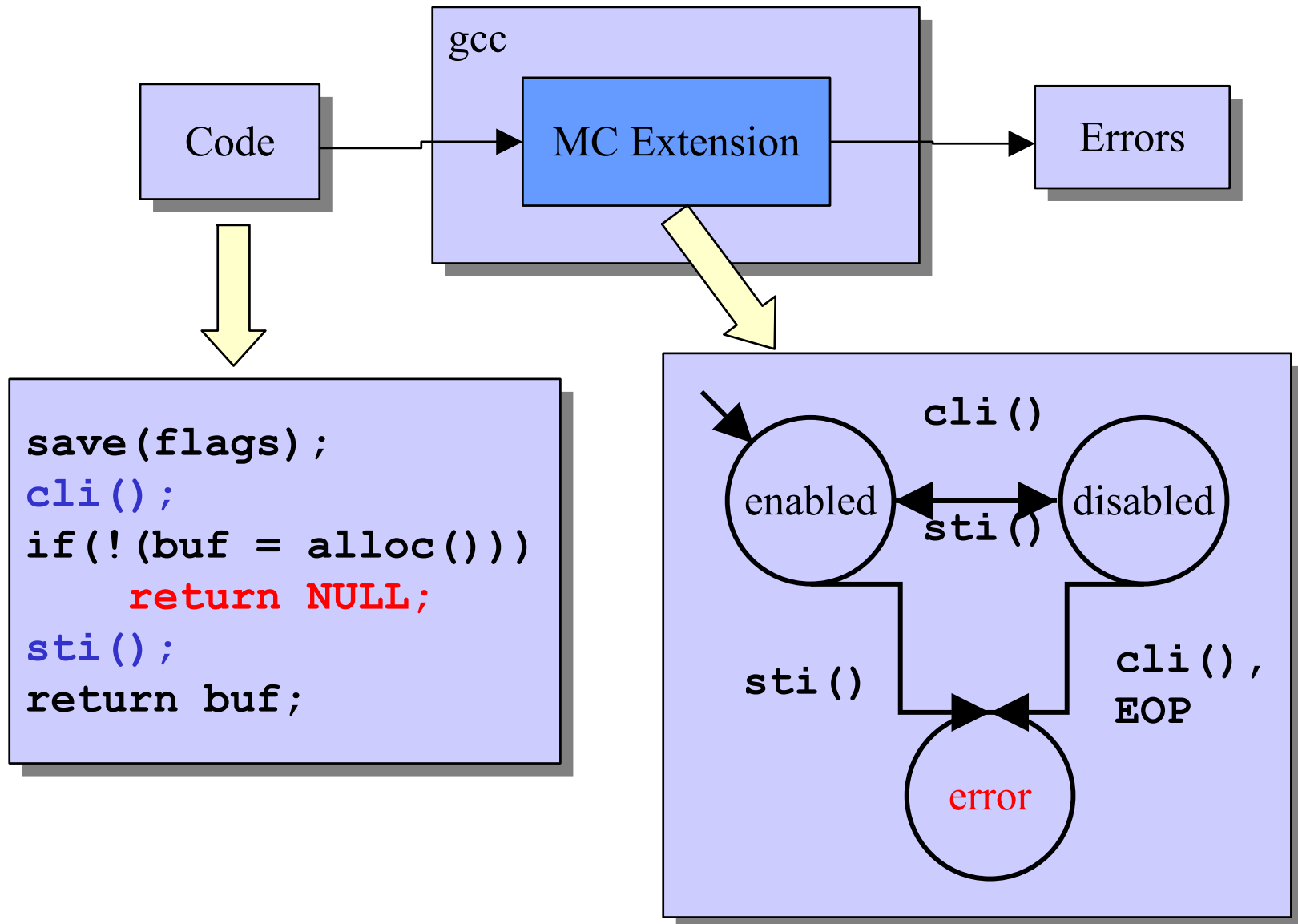
What is MC?

Provide compilers with system-specific information

Allows compiler to check for system-specific rules

Very effective in finding bugs

The MC System



What's next?

More than a bug finding technique?

Compiler extensions in multiple places?

More ability to interact with the compiler?

Transformations and optimizations?

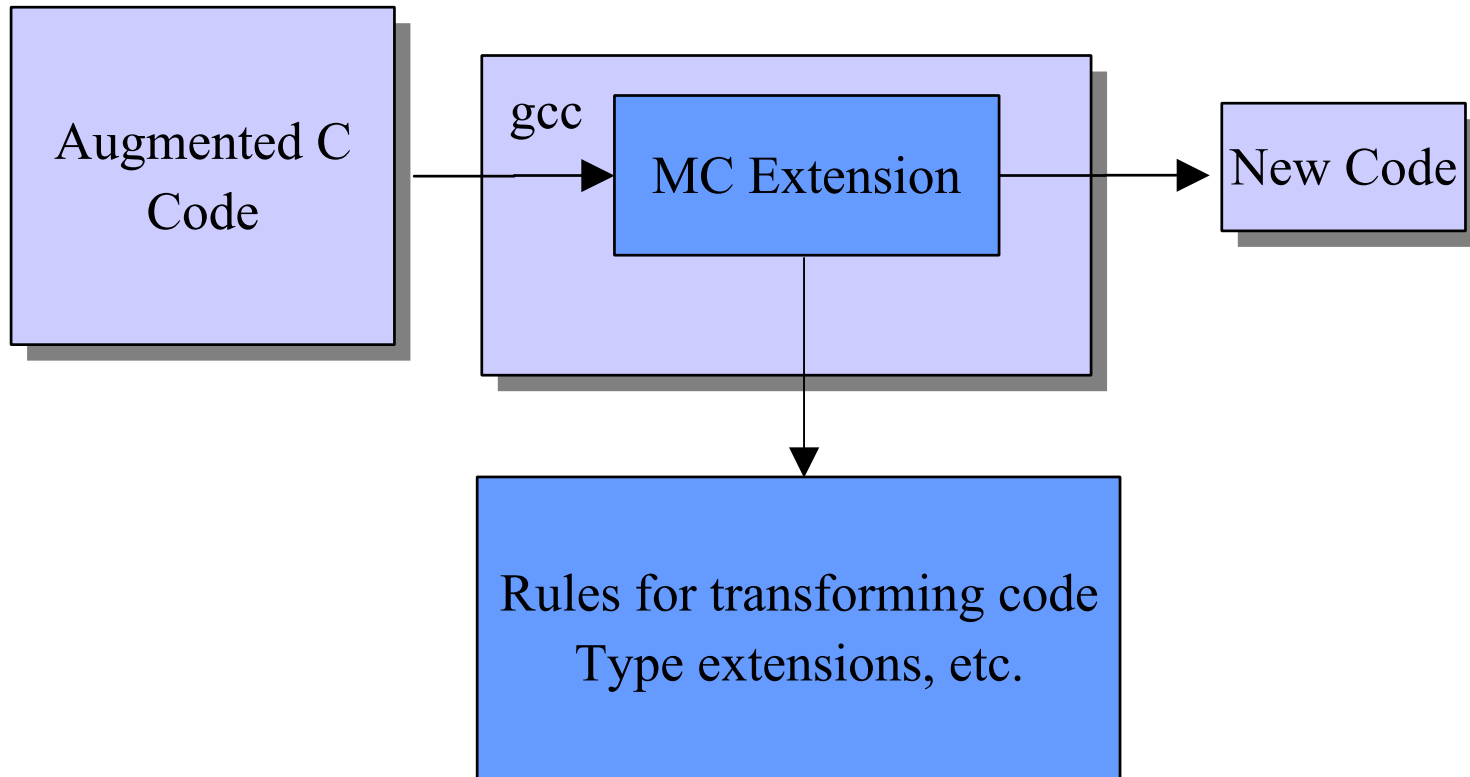
C to C compiler

```
sm hello_world splicer  
{  
  ${mc_is_stmt (mc_stmt)} ==>  
    {  
      mc_emit ("%t\n", mc_stmt);  
    }  
}
```

Type extensions

```
int main()  
{  
    int a "32 12";  
    int b "64 0";  
    int c;  
  
    c = a + b;  
}
```

New Picture



What about SSC?

We want lightweight domain specific languages

Probably best to be C/C++-like in syntax (e.g. Brook)

We want a fast way to implement them,
play with them, etc.