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# ***SGI C++ ABI Issues***

*Last modified 18 May 1999*

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Items marked with an asterisk (\*) may have base ABI implications. Most issues are potentially generic-level issues.

## Object Layout

- Virtual function table
- Virtual base classes
- Multiple inheritance
- Empty base classes
- Empty parameters
- \* RTTI (`type_info`) object file representation

## Virtual Function Handling

- Adjustment of "this" pointer
- Covariant return types

## **Global Object Construction/Destruction**

- \* Interaction with `.init/.fini`

## **Exception Handling**

- \* Unwind descriptors: language-specific descriptor format
- \* Unwind descriptors: personality routines
- \* Clarify unwind process: prefer API basis
- \* Why do unwind routines need to operate as nested procedures?

## **Template Instantiation Model**

- When does instantiation occur?
- Separate compilation

## **Name Mangling**

- Mangling convention
  - \* Issue: how to make names manageable size
  - \* Method to distinguish template instantiation and specialization
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