WG9 Forum Results

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Presented to

ISO/WG9

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ALIOOOP Group

- Issues of High Importance
  - Interfaces
  - Type stubs or equivalent – mutually dependence
  - Object-Oriented syntax (tagged types only, e.g., “Object.Method”)
  - Pragma for requiring local variables to be initialized
  - Checking for physical units (physics, chemistry, etc.)

ALIOOOP Group

- Issues of Medium Importance
  - Access Type conversion – implicit instead of explicit
  - Limited types being less limited – aggregates and then function return
  - Pre/Post Assertions

IRONMASC Task

- CPU Accounting – High
  - TCB attribute (make API?)
  - Pay attention to CMK's four annexes
  - Need to insert provisions for bare machines for configuring scheduler and loosen some remarks

IRONMASC Task

- Distribution – what to do?
  - Can we do something about Global Time? – issue about how to synchronize clock (for all such protocols, it's doable, but might be hard)
  - Nobody uses the Distributed Systems Annex
  - Need multiple clocks for fault tolerance, then will drift – need to keep them in synch
  - DSA (programmatic distribution) better than CORBA (needs lower primitives)
  - Shared memory is highly complex, but Ada works

IRONMASC Task

- Safety Area – what is desired?
  - Standardized set of restrictions
  - Predefined libraries
  - Style check by compiler (can be done with a separate tool using ASIS)
  - Will OO affect real-time?

IRONMASC Task

- Assertion Facility
  - Distinguish dynamic assertions done that is intended versus effort of “design by contract” (static)
  - Static case – for every significant issue
  - Dynamic case – for simpler issues
- Units problem – want a good solution

IRONMASC Task

- Dynamic mechanism
  - Simple but issue with function side effects
- Static mechanism
  - Involves quality predicate logic outside realm of compiler technology today
  - Maybe put in an optional Annex?
  - Comparable static assertion OK

IRONMASC Task

- Common Criteria
  - Wipe memory clean when deallocated or stack popped – pragma?
- Simpler syntax for Unchecked Conversion
- pragma ReadOnly (object)
- Shift operator for modular types