

1. Object name resolution should not invoke parser or semantics and should generate no garbage.
2. Obsolescence computations for demoting a spec in a world with 100 units should not exceed 400 msec cpu time and should not require referencing data structures exceeding 20 pages, for the common cases (80% +). In particular, such demotions should not require visiting many Diana trees (preferably none) and should not require a large DDB.
3. Creating and Deleting objects in directories should not require the parser, semantics, or change analysis. The system shall support creating and deleting more than 5 objects (empty files) per second.
4. Basic directory system can be elaborated and tested without the compiler or Diana.
5. Object Editor shall not have to reconstruct object tree as the result of commit (creating new version), install, etc.
6. Accessing data through configurations shall introduce essentially no overhead (less than 3% for an open).
7. All space consumed must appear in the directory system. (see [system.issues]disk\_space.txt).
8. No cross world ddb required. Demoting units requires no cross world obsolescence processing. Cross world analysis should only be required when importing and deleting world views.
9. Computing compilation order (Make) should require less than 5 seconds elapsed for a 100 unit world and may add less than 3% overhead to commit operations.
10. Diana (relative to Beta (A1) Diana).
  - a. Same (+/- 10%) execution cost for the sum of the Diana operations required to compile a unit.
  - b. 50% of the space consumed currently.
  - c. 98% of tree transformations in place (no garbage).
  - d. No compaction required for installing units (optional for cases where user has made extensive editing changes which generated garbage).
  - e. Demoting a unit does not require a traversal of the tree (dirty tree cleaner).
11. Design for all permanent data structures and all high-performance temp data structures managed by kkom must fit on GPA's white board (else it's too complicated).
12. The system must survive a loss of portions of the virtual memory in a reasonable manner. In particular, only objects whose pages were lost should be lost, and other objects (including orphans) should be recovered in a manner easy to interpret by the user. (see [system.issues]disk\_space.txt).
13. Batch compilation rate shall exceed 1000 lines per minute for R1000 code (install and code, no parsing).