

	Free Text	Relational stand. extend.	Semantic E-R extend.	Object-oriented
1. Design of STRUCTURE for holding text	yes	not yet	-	-
. unlimited size of fields and records	limited	yes	yes	yes
. symbolic identification of records	yes	yes	yes	yes
. data models	yes	yes	yes	yes
. hierarchical	yes	yes	yes	yes
. non-hierarchical (shared sub-obj.)	no	no	diff.	yes
. ability to retain un-normalized data	yes	no	no	yes
. dynamic control of unit size (aggreg)	no	diff.	diff.	yes
. generalization and specialization (inher.)	no	no	yes	yes
2. VIEWS	no	yes	no	yes
. derived structures	no	yes	no	yes
. parallel texts	no	no	poss.	poss.
3. RETRIEVAL	yes	no	-	-
. fast	yes	yes	-	no
. non-procedural interactive languages	yes	yes	-	no
. closure	no	yes	-	no
. words + phrases in text	yes	yes	-	yes
. context	yes	yes	-	yes
. proximity matching	yes	yes	-	yes
. keywords	yes	yes	-	yes
. free vocabulary	yes	yes	-	yes
. controlled vocabulary (thesauri, stop)	yes	yes	-	yes
. 'formatted' data	limited	yes	-	yes
. identifiers of text (symbolic key)	limited	yes	-	yes
4. Various formats for DISPLAY	yes	yes	-	-
. human	yes	yes	-	-
. machine-machine (vp, mark-up)	yes	yes	-	-
. management with consistent updating	yes	yes	-	-
. in-place modification, addition of data,	yes	yes	-	yes
. dynamic behaviour - control of doc. life	no	no	no	yes
. version management	no	no	no	diff.
. concurrent access	yes	yes	-	yes
. value inheritance for natural data loading	no	no	yes	yes
6. INTEGRITY	yes	yes	-	-
. protection against hardware failures	yes	yes	-	-
. referential	no	yes	-	yes
. value	yes	yes	-	yes
7. SECURITY	yes	yes	-	yes
. whole file	yes	yes	-	yes
. designated fields, data driven	yes	yes	-	yes
8. NAVIGATION through texts following conceptual paths	no	yes	-	yes
. referential transparency (hypertext)	no	yes	-	yes
. trail maintenance	no	yes	-	yes
9. Textual ANALYSIS	no	no	no	yes
. function integrated with data	no	no	no	yes
. word frequency lists, distribut. freq.	yes	yes	no	yes
. statistical tests e.g. sentence length	yes	yes	no	yes
. word co-occurrences	yes	no	no	yes
10. SEMANTIC aids	no	no	poss.	poss.
. parsing	no	no	-	poss.
. predicate logic, machine translation	no	no	-	poss.
. cognitive textual types	no	no	-	poss.
11. MULTI-MEDIA	no	no	poss.	poss.
. integration of text and other data	no	no	poss.	poss.

Figure 1: User Requirements for Textbases and their Satisfaction by Database Techniques.