

**Requirements by Use Case per Duerr et al Identifier Paper**

	A	B	C	D	E	F
1	Paper Requirement	Means for testing in Testbed environment	Unique ID use case?	Unique locator use case?	Citable ID use case?	Scientifically unique Use Case?
2	Location "independence" **	Is a property of an identifier. Preferably, would be embedded in the data object or be computed, like a checksum. Did not test.	x			x
3	Location "invariance" **	Is a property of an identifier. Would be able to ascertain if the DO could be found regardless of its current location. Did not test.		x	x	
4	Generated at time of DO creation	Restrictions on when DO can be created? Who can create? Can be created in the field? For testbed, DO already created. N.A. except for process of assignment of IDs.	x			x
5	Can be created after DO is considered to be permanently available	Who can create? Data producer or data archive? Can be created in the field? For testbed, DO already created. N.A. except for process of assignment of IDs.		x	x	x
6	ID necessarily placed within or carried along with DO	Not practical to test; is a practice based on usage.	x			x
7	Referenced with descriptive MD for DO	Is descriptive MD associated with the DO? If so, how extensive and how associated.	x			x
8	Difficult to change once established	Test to see if we can go back & change the ID once it's created	x			x
9	Created once & never modified thereafter	Test to see if we can go back & change the ID once it's created	x			
10	Globally unique	Property of the identifier. Assess what mechanisms within the ID provider system or service organizations exist to verify global uniqueness? Is there a way to check for duplicates within the ID provider system?	x	x	x	x
11	No requirement for 3 <sup>rd</sup> party naming authority beyond data producer	Ck for operational rules associated with account / ID creation, if applicable.	x			x
12	3rd party naming authority considered necessary & useful	Ck for operational rules associated with account / ID creation, if applicable.		x	x	

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13	Data is findable after creation despite changes in custodianship	Availability of landing page? Not tested in the wild since the sources of the data sets we used are trusted. Is a recommended practice.		x	x	
14	Points to trusted source that can authenticate current copy	Availability of landing page? Not tested in the wild since the sources of the data sets we used are trusted. Is a recommended practice.		x	x	x
15	Mechanism exists for locating earlier & superceded versions of DO	Availability of landing page? Not tested in the wild since the sources of the data sets we used are trusted. Is a recommended practice.		x	x	x
16	Mechanism exists to perform ongoing maintenance of ID	Tested by changing descriptive MD after initial establishment. Where is that done & who has the responsibility for initiating? How are changes conveyed (e.g., batch or one by one?)		x	x	
17	Broadly accepted by publishers	Check on web page to see if used; or contact science publishers, e.g., HighWire Press, Thompson-Reuters, others?			x	
18	Can be assigned to data sets	Test ease of doing & how easily referenced by machines & humans		x	x	
19	Can be assigned to components of data sets	Test ease of doing & how easily referenced by machines & humans		x	x	
20	Has mechanism for intrinsic verification of semantic equivalence of data content	Only way to assess by noting how scheme differentiate b/w different formats of same content? Concluded that a mechanism such as this would not need to be not only be an identifier, but also something like a checksum or message digest that would identify (sort of), but also perform other functions related to differentiation or semantic equivalence (e.g., with statistical data that can be reformed, but still has the same semantic meaning).				x