**Records in Context (RiC) 1.0 – Comments on First Draft**

**Relationships in RiC (1)** posted*Sat Sep 17 05:32:37 EDT 2016*

Someone has certainly been busy - 792 relationships and still counting. Phew! I read somewhere that a diligent German historian was only able to find 210 reasons for the fall of the Roman Empire. We certainly got that beat. This is a list of implementation options rather than a conceptual model – some of the logical possibilities when designing and implementing an application. To explore the full range of possibilities, two things are needed :

1. the underlying relationship-types must be identified;

2. the terms must be defined (cf. p.39) so that we all interpret the words in the same way.

Then we can pay more attention to refining or expanding those concepts that are currently being most contested (e.g. “create”) and to discovering additional instances (e.g. “received by” under Transmission, “involved party” under Formation, “adopted (by)” under Existential Features, etc.). But it is more important to conceptualise than to itemise, therefore (by way of example):

One could begin with a thesis (inviting the antithesis) that provenance is to be found in Relationship-Type : Formation (see below). This could be tested by examining whether the 63 instances listed so far are, in fact, acceptable statements of provenance and whether any other ideas about provenance, of the kind that have been put forward lately in the literature, can fit within the instances listed or require additional instances to accommodate them. Is provenance only to be found within Formation? Are there formative relationships that are not allowable statements of provenance? Can provenance be found in other Relationship-Types? Does a formative relationship between Agents ("establish", for example) confer ambient provenance vicariously on a document-type? If so, how would that differ from "uses [agent-delegate]" which I have nominated as Existential? Alternatively, should ambience and provenance be kept conceptually separate? Does the Relationship-Type framework assist or hinder in (re)defining or (re)imagining our core concepts such as provenance.

I have trouble with two of the proposed entity-types (viz. Date and Place) of which more anon, so I can’t yet come to terms with those proposed relationships involving one or other or both of those (204 out of the total). Interestingly, I singled these two out as problems long before I reached p.91 where Date and Place are also nominated as "properties" of relationships so maybe I'm not alone in needing to think some more about them. And I don’t think it’s worth dwelling long over the relationship-type “associated with” (292 out of the total). We’ve used that for years as a cop out for making links where we are too lazy or too uncertain to be specific. Anything can be associated with anything and, once you’ve said that, there’s not much more to say and little benefit from saying it 292 times. Of the remainder, here is my first attempt at a categorisation into relationship-types (without the benefit of certainty as to what any of the terms mean):

* **Relationship-Type : Formation** (63 instances) viz. “create/created by”; “authored”; “collect(ed); “wrote/written”; results from/in”; “accumulate”; “assemble”; “arrange”; “establish”.
* **Relationship-Type : Governance** (42 instances) viz. “owns/owned by”; “rights held”; “controls”; “directs”; “manages”; “superior/subordinate”.
* **Relationship-Type : Succession** (22 instances) viz. “successor/predecessor”; “parent/child”.
* **Relationship-Type : Belonging** (30 instances) viz. “part/part of”; “member of”; “is/has example”.
* **Relationship-Type : Possession** (12 instances) viz. “held/holder”.
* **Relationship-Type : Transmission** (4 instances) viz. “sent by”.
* **Relationship-Type : Documentary Features** (73 instances) viz. “copy of”; “draft/original of”; “subject of”; “addressee”; “documentary form”; “evidence of”.
* **Relationship-Type : Existential Features** (57 instances) viz. “has/had functional relation”; “assumed identity”; “sibling/spouse”; “uses [agent-delegate]”; “pursues/occupies [position or occupation]”; “fulfils [function]”; “performs [activity]: “authorize(d)”; “required competency”; “defined/revised [by mandate]”.

There is, of course, much room for debate (e.g. is “authorize” an instance of the Governance or Existential type?). Nevertheless, I would find discussion at that level more rewarding than simply multiplying instances

before something like that has been done.

**Relationships in RiC (2)** posted*Sat Sep 24 02:53:40 EDT 2016*

[Daniel Pitti commented: … I think you are correct in saying that the current list of relations under each of the high-level entities is not a conceptual model. I would say that working our way to the relations being properly conceptually modeled is underway but by no means complete… The need to classify and conceptually organized the types is very much on our agenda. I think your first pass very good, but others have been suggested… ]

I have no problem with a long list that illustrates a concept. The RiC 1.0 list of relationships could easily stretch from 792 instances to 7,920 and beyond. Thinking up new instances could become a parlour game for archivists. My interest is in what principle(s) the instances illustrate. My suggested categorisation was derived from what is there in RiC 1.0 and is not what I would have come up with if I'd started with a blank page, so "something to live with" would indeed be most welcome. What I mean by implementation is that, w/o further explanation, one has to infer what the terms mean and how they might be used. Taking "creates", for example, and ignoring for the moment its diverse and often contested meanings (simply taking it as an unproblematic idea) it can be applied as a relationship thus:

[ACTOR A]<creates>[RECORD X]

and this seems to be the how RiC 1.0 means it to be understood.

But all recordkeeping is based on describing action and circumstance and "creates" is an action which can, therefore, be rendered as a FUNCTION rather than a relationship (as well as, not instead of). The descriptive

statement "A creates X" can then be rendered differently within the RiC 1.0 framework, where FUNCTION M = creates, as:

[ACTOR A]<performs>[FUNCTION M]<to produce>[RECORD X].

It may be that somewhere in the list of possible relations in RiC 1.0 the option of using this second formulation is already provided for but, if so, only the diligent will find it and, absent more explanation, some of them may not understand that these are two allowable ways of achieving the same result. I agree, therefore, with those who have argued that it is important to draw out statements about how relationships are formed from the list of enumerated possibilities.

In the first formulation, according to RiC 1.0, Date & Place could be formulated as properties of a relation and also as instances of Entity-Types in their own right (instead of rather than as well as in any particular instance, I suppose). In the second formulation, it would be easy to link an instance of a Date-Entity and an instance of a Place-Entity to an instance of Function M. For those working a formed archive, the second formulation may seem unnecessarily complex but those involved in active record-making may encounter '000s of create transactions every day and a developer might find it a more effective way of reaching the same outcome (viz. a statement to the effect that "A creates X"). Developers are clever people and could, no doubt, come up with lots more ways of achieving the same outcome for every rule, taking account of the differing needs of their client populations, so long as we provide them with a robust conceptual framework.

**Entities in RiC** posted*Tue Oct 11 13:46:05 EDT 2016*

Confusion between Recordkeeping Entities and Authority Records began with ISAAR. This seems an apposite moment to correct the misunderstanding. Four of the 14 proposed Entities (Documentary Form, Date, Place,

Concept/Thing) could be represented as properties of the ten remaining. There is no harm in having those four as entities if that is useful (though the utility eludes me) and many more besides. In some metadata schemas,

Relationships are nominated as entities, for example. But, if you’re going to name four, you should make it clear that many other kinds of entity are possible and, if you’re going to name those four, you should make it clear that they can (optionally) be treated as properties.

Alternatively, true Authority Records, like EAC-CPF and SNAC, could be built for Documentary Form, Date, Place, Concept/Thing, etc., etc. to control data content of the properties of Recordkeeping Entities. This leads on to the question whether we need to stipulate the properties of Authority Records used in recordkeeping. The other ten Entities proposed in RiC 1.0 are true Recordkeeping Entities whose properties can be controlled by Authority Records of one kind or another (or not, as the user decides). These ten entities can be conceptualised as instances (not the only possible ones) of three basic Entity-Types that are particular to recordkeeping :

* DEEDS: events or circumstances that give rise to recordkeeping – e.g. functions, functions (abstract), activities, mandates, processes, responsibilities, products, etc.;
* DOERS: actors who undertake the Deeds - e.g. agents, occupations, positions, corporations, agencies, processes, persons, families, etc.;
* DOCUMENTS: memories of Deeds undertaken - e.g. records, record components, record sets, series\*, fonds\*, documentary objects, processes, artefacts, legends, myths, etc.

I deliberately include “process” under all three types to illustrate the point that the same thing can be described in more than one way, using different Entity-Types as appropriate. I have already suggested the use of Relationship Types and I think using Entity Types is a better way also.

Four properties are common to all Recordkeeping Entity-Types in RiC 1.0 (Global Persistent Id, Local Id, Name, and General Note) and to those I would wish to add Date (either as a relationship or a property). Within the framework of an entity-relationship model, that would satisfy what I see as the mandatory requirements for all Recordkeeping Entities - viz. that they possess :

* IDENTITY: because every record is unique;
* DATES: because every record is time-bound;
* RELATIONSHIPS: because no record stands alone.

Other common properties, such as name, are useful but not essential in recordkeeping. If I were modelling RiC, I would represent the common properties as belonging to a Super-Type of the kind I have sometimes called the URO (Universal Recordkeeping Object), and more facetiously the HERO (Hurley’s Enduring Recordkeeping Object). I think a good many more properties (e.g. Description) could be remodelled as common to all Recordkeeping Entities and brought into the URO either because they are already common to all Recordkeeping Entities in RiC or should be.

Other properties might be better handled in other ways, at least as alternative options. Some of these are trifling but “Accruals” (P24 & P25) should be given further thought. Accruals are part of a Process (viz.

accessioning) and some people might want to document accessions as Record Sets (or Sub-Sets for incorporation into Sets). I would. That suggests that an option needs to be provided allowing accruals to be treated as Record Sub-Sets with relationships to Record Sets as part of the history of the formation of the Set and not merely as a property forecasting future possibilities. In the physical world, it was sometimes necessary to manage Transfers or Deposits as entities (Record Sub-Sets) separately from Accessions because they comprised one of more Accessions, formed before, during, or after relocation, and I imagine that similar entities might be useful during data migrations.

**RiC: Quo Vadis?** posted *Mon Jan 30 00:42:38 EST 2017*

Just before the deadline for comment closes on RiC, here are some clumsy existential questions. They're not just questions for RiC, of course, or what EGAD's next steps should be - but they may apply to the future direction of description overall (RiC or no RiC) - at least I hope it may be so.

**Query 1 (Structure):** Can we define an Entity/Relationship type as one containing instances that all operate according to the same recordkeeping requirements (allowing for extensions by sub-types that augment but do not conflict with the common requirements)? Can they be managed, in other words, using identical rules or practices (with extensions) that are set at the level of each type rather than each instance? I once theorised that an ownership relationship is a succession relationship in disguise - easily demonstrated (see below), but not so easily proven. Can we separate conceptualisation and implementation so that a proliferation of instances within each type would not matter. You could have 8, or 800, or 8000 instances of any type; the same standardised practice would govern all. Implementers could then select those instances that are useful to them, ignore the rest, and then apply the rules (or not) as appropriate. Could that approach be taken within an infrastructure (policies, procedures, roles, etc.) that is not particular to any one descriptive programme, jurisdiction, or prejudice?

**Query 2 (Identity):** How should we think of the nexus between the description of an entity/relationship and the entity/relationship itself? How does an instance-in-action being described differ from the description of it? Is description simply a parallel universe, laying down a descriptive world alongside an actual world? Does a recordkeeping (descriptive) system operate in a descriptive universe or in an actual universe or does it straddle the two? Where does our understanding of a corporation, for example, "exist" - in the actual world or within a descriptive (registration) system, or both? Can a description of an instance-in-action in the actual world (physical or virtual) be turned into a kind of avatar so that it can operate in a recordkeeping system as if it were the thing itself, not just a description of it? What is the difference (if any) between action in the virtual world and action in the physical world? How can two different descriptions of the same instance (in the descriptive world) be reconciled? Is there ever a case of a graphical representation for which no extant personality or actuality exists?

**Query 3 (Validation):** How can authenticity be conferred on descriptions that operate outside of the source or native system? Could they be trust-worthily registered or validated using PKI and/or blockchain? What kind of recordkeeping system would be needed to validate them (viz. descriptions of description) and could that system be a source for persistent identification? To what extent would that require re-contextualisation? I once asked my friend Terry Cook when he was in full flight about top-down appraisal: How do you know when you're at the top? Reminds me of a great story I once heard about Hilary Jenkinson when he was interviewing a nervous young Oxbridge graduate for a job. Asked what had been his special field of study, the youngster replied, "The end of the 17th century, sir". Jenkinson growled, "Which end?" An archivist's question.

**PS.** Demonstration of a succession relationship disguised as an ownership relationship:

Consider a simple succession relationship:

AGENCY B------<succeeds>-----AGENCY A

Now, consider two ownership relationships:

FUNCTION G FUNCTION G

<exercised/owned by> <exercised/owned by>

(from 1901-1925) (from 1925-1980)

AGENCY A AGENCY B

The ownership relationships can be described in a table:

FUNCTION G ....

|  |  |
| --- | --- |
| **Dates** | **Exercised by….** |
| 1901-1925 | Agency A |
| 1925-1980 | Agency B |
| 1980-1995 | Agency C |
| 1995-date | Agency D |

The ownership data captured in the Table is sufficient, without any need for further data input or description in the form of a succession statement, to generate a succession relationship:

AGENCY B--------<1925: succeeds in exercise of FUNCTION G>-----AGENCY A

Not only has an ownership relationship metamorphosed into a succession relationship, there is added value from depicting how and when the succession arises. The data table can, in fact, generate the following descriptive statements:

* AGENCY B--<succeeds>--AGENCY A in 1925 in exercise of FUNCTION G
* AGENCY A--<succeeded by>--AGENCY B in 1925 in exercise of FUNCTION G
* AGENCY A--<exercised/owns>--FUNCTION G from 1901 to 1925
* AGENCY B--<exercised/owns>--FUNCTION G from 1925 to 1980
* FUNCTION G--<was exercised/owned by>--AGENCY A from 1901 to 1925
* FUNCTION G--<was exercised/owned by>--AGENCY B from 1925 to 1980

**PPS.** The query "Does a recordkeeping (descriptive) system operate in a descriptive universe or in an actual universe or does it straddle the two? " was posed way back in the SPIRT Project <<http://www.infotech.monash.edu.au/research/groups/rcrg/projects/spirt/deliverables/austrkms.html>> (Business Recordkeeping entity class posited as a sub-set of the Business entity class). I never thought the answer was entirely satisfactory, but it was the right question to ask.