

Example: "Resources for designing steel structures":

UDC assigned by the National Library of Portugal  
624.014.2  
624.07.001.63

BCnotation  
→gc NB1(MEFe)

The BCC string can be explained thus: the term →gc for design comes from the schedules of relators, under the schedule g of general relators; the term NB1 for structures comes from the class N of non-human environment, subclass NB for built environment; the qualifier (MEFe) comes from the subclass ME "Chemical elements"; Iron is Fe [Steel could be indicated by the precise chemical formula. As the BCC is fleshed out it will be possible to provide short notation for common compounds such as steel.] Most properties come from schedule Q, such as QT4 "historic" or QI3 "secret"; sometimes these are combined as in QC5QH4 is (more)(mass) or heavy.

Methodology:

- Dozens of documents with assigned UDC strings were assigned BCC notation.

Results:

- Similar notational length
- BCC synthesizes more terms
- UDC network more complex
- UDC more subject strings
- Implications for expressivity, precision, ease of use

**Abstract:** Interdisciplinarity in knowledge organization is an increasingly critical component of the theory of how knowledge might be usefully clustered around particular phenomena rather than in disciplinary hierarchies. Gathering by discipline provides certain epistemic assurances concerning the treatment of phenomena, but concomitant scattering by discipline prevents the phenomenon-based knowledge discovery that is a hallmark of interdisciplinary research. This poster connects interdisciplinarity to facet analysis. We share results from an exploratory study that compares the approach to interdisciplinarity provided by the Universal Decimal Classification's synthesis and faceted auxiliaries to that provided by the Basic Concepts Classification, which uses basic grammar to incorporate elements of facet analysis. A set of use cases was assembled for which complex multiple UDC strings were compared to grammatically structured BCC strings. The nodes, auxiliaries, and connectors in classified strings, in both UDC and BCC, constitute a network among elements of each classified string. We show how the network structures are comparable, not just as descriptive data, but as networks underlying classification as navigable pathways among concepts.

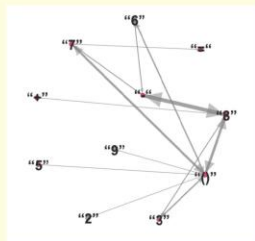


Figure 1. Network map of UDC components.

The nodes representing main classes, auxiliaries, and connectors in classified strings, in both UDC and BCC, constitute a network among elements of each classified string. For example, in the UDC string "808.2(075.3) main class "8 Language, Linguistics. Literature" is linked to "0) Special auxiliaries of form." A network map is a way of visualizing these linkages as they occur in a set of classified strings, such as the sample in our study. Figure 1 is a network map of all UDC components (main classes, auxiliaries, and connectors) in our study.

The larger nodes indicate stronger linkages, such that we can see that classes "7", "8" and "3" are most often linked to special auxiliaries of form or language, classes "8" and to a lesser extent "6" and "7" link to the hyphen, which in this sample represents the usual colon ":" to identify a simple relation.

Figure 2, is a partial network map based on the BCC string from our example we see that "→gc" is a general relator linked to main class "N" for non-human environment and this is linked to a qualifier using class "M" for things. Figure 2 is a network map of all BCC components (main classes, relators, and qualifiers) in our study.

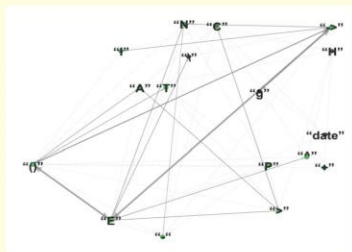


Figure 2. Network map of BCC components.

# Comparative approaches to facets in interdisciplinary KOSs: UDC and Basic Concepts Classification

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Stostak, R., Smiraglia, R. P. (2017). Comparative approaches to interdisciplinary KOSs: use cases of converting UDC to BCC. In: *Proceedings of the NASKO Conference, Champaign, IL, 14-15 June, 2017*. Edited by R.P. Smiraglia, L. Rideour. [Place: Publisher, pp. or URL] forthcoming.

# Comparing UDC to BCC

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