Chowdhury (2004) lists the three main components of an information system as "items of information, users' queries, and matching of these queries with the document database" (p.2). Dr. Edna Reid (2008a), in her lectures for the Library 202 course at San Jose State University's School of Library and Information Studies, differentiates between a traditional information retrieval system, which unites the querying user with a document surrogate, and a modern system, which brings search results containing both bibliographic information, and also the full text of the stored documents. The iTunes music library information retrieval system is an excellent example of a modern, evolving information retrieval system. Part of the larger iTunes search system, which also retrieves film, podcast material and some applications, it allows users to organize, search, and retrieve their personal collections of stored or downloaded music and cover art using a variety of search fields and techniques, and also provides suggested links to additional material which can be purchased (Apple 2008). As an example of the first component of an information system, the document subsystem (Reid, 2008a), the iTunes library provides a simple indexing subsystem, some controlled vocabulary, and, increasingly, options for the sort of inviting, interconnected search capacity described as a future goal by Marcia Bates (1986) in her pre-iTunes vision of a welcoming search system. Users' music is automatically catalogued using predetermined iTunes fields: name of musical work, time duration, artist, album name, composer, and genre—typical metadata tags which are familiar and productive for most users (Reid, 2008c). When music is uploaded to iTunes from the users' personal collections, or when it is purchased through the iTunes music store, these fields are populated by iTunes using automatically retrieved digital information. The access points are limited (Chowdhury 2004), but since most users of iTunes are the creators of the collection, this limited number of fields is sufficient for efficient retrieval. Most owners know, for example, that they have songs by Bob Dylan, and a search under his name field is sufficient to be very exhaustive (Chowdhury 2004). All the documents can be sorted by users so they are grouped hierarchically within any of the fields.  It's interesting to note, however, that, as Dr, Reid mentions in her SJSU SLIS lecture number 3 (2008b), during the system decay phase, systems may become less effective as new requirements and new technology evolve. It is becoming increasingly common for the iPod to be used as the main music system for an entire home. Receiving last week a request from my sister to "put on something quiet for dinner", neither the genre sort nor the artist sort was exhaustive enough to bring me classical choices I found later by browsing.

Even with these limitations, the iTunes library's second component of an information retrieval system--the users' query, is a very effective and accessible system for its limited intended use. The decisions made in the design and analysis phased of the system design (Reid, 2008b) support the users' successful search for specific stored material. The iTunes library uses some precoordinate indexing, as its genres choices are limited and preset, but postcoordinate searches are also possible by entering text into the search window. Performers, titles of works and albums can be word-searched, Boolean searches can be performed, and the search vocabulary is very flexible. Supporting Bates' (1986) "side of the barn" principle from the "Design Principal" section of her article, either 'AC/DC' or 'ac dc' will bring users to "Who Made Who', though acdc will not. Either a first or last name of performer, or any word in a title can be searched easily, though more complex searches are neither exhaustive  (a Boolean Search for Johnny Cash AND Bono will retrieve their duet, but a search for Johnny Cash AND June Carter will not do the same, though the piece is in the library) nor specific (a Boolean search for The Decembrists as performer

also brings the Counting Crow's song "A Long December"). A stop words list discards 'the', and even a partial, first attempt at a spelling will bring possible matches to the screen. Users are also able to sub-catalogue their own documents into personalized playlists which can be saved for later use (Apple 2008), and to store their documents in a new 'Genius' format, a graphic organizer displaying album cover art, which can now be sorted and grouped using most of the same fields available in the text-search (Apple 2008). Whether navigating through music libraries belonging to other people, or searching back through increasingly long-standing and lengthy personal playlists, the flexible search possibilities and supportive vocabularies provided make the iTunes music library, as are many Apple products, an exemplar of user-friendliness.

This search ease, of course, does not exist solely to fulfill the information needs of users. Apple also intends to provide the easiest access to their products for sale, and increasingly they work to make transparent the line between what is stored and what can be purchased. Dr. Reid's Lecture 8 provides links to an article on natural language use in a website selling jeans—clearly retail sites, highly motivated to unite searcher with product in their drive for profit, are driving advances in information retrieval (2008d). The third component of the information retrieval, matching the user query with the desired document, is greatly expanded in the Apple retrieval systems to include not only the sought documents, but also material Apple is hopeful the searcher *will* want, once he or she knows it exists—a sort of 'see also' for your pocketbook. The iTunes store link has always shared a site page with the users' private library, just as Amazon has made purchasing suggestions on the order page. Now, users can also enable the iTunes MiniStore, which will suggest similar material for purchase when the user is exploring inside her private iTunes music library (Apple 2008). This is yet another blur of the boundary between the personal and the marketplace which may increase the discomfort of some with our national decision to cede our personal entertainment management to the Apple Corporation. Still, when considering Bates' attractive notion that "catalogs and other information retrieval systems should be fun" (1986, High variety: redundancy section), it is hard to deny that, for most users, the iTunes music library information retrieval system, which combines storage, organization, search and retrieval, and multi-media shopping is very hard to resist.

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