Librarians are faced with the potential of an electronic environment where most aspects of content and service provision depend on access to electronic resources. At the same time, it has become painfully obvious that integrated library systems (ILS) alone do not provide the structured management needed to keep track of and maintain all aspects of access mechanisms used to deliver these resources. In the past three years, librarians have seen the development of numerous electronic resource management (ERM) tools to help with the ever-expanding growth of electronic resources and the myriad ways in which access provision is offered for these resources. So how do librarians decide which tool to purchase and what will best serve their patrons? There are two essential questions surrounding electronic resource management. Firstly, what issues of ERM need to be addressed within your organization? Secondly, what is it that your organization is attempting to achieve with the implementation of electronic management tools that will make this accessibility of resources more readily available to the end-user?

Before these questions can be answered, a few definitions are needed:

- An electronic resource is an item for which a library pays for access or to which it has established access via the web OPAC and/or via the web pages designed and controlled in a given library. An electronic resource can be an electronic document, an electronic thesis/dissertation, an electronic book, an electronic journal, an electronic governmental publication, an electronically accessible image, etc. Basically, it is any content served electronically that is deemed valuable by a given library and to which access should be provided.
- The secondary definition of an electronic resource is that it is available 24/7 or whenever an end-user wants to access it via the library’s web presence.
- Ellen Finnie Duranceau helps to define ERM as the support of an electronic resource from selection through purchase, access, license management, end-user support, evaluation, and renewal and cancellation.

In the light of these definitions, what are ERM tools? In the broadest context, ERM tools are any products or series of products that allow a library to support electronic resource provision to their end-users. In the narrowest definition, ERM tools are the recent spate of stand-alone modules developed by ILS vendors and electronic journal management providers to manage electronic resources. These can either be integrated into an existing suite of tools or can stand outside any given integrated library system acting as the metadata licensing source to feed much-needed information about electronic resources into
numerous other access provision tools such as OpenURL link resolvers, metasearch mechanisms and discovery front-end modules. Within the past three years, most of the focus has been on ERM tools that have been developed by the ILS vendors. Almost all major ILS providers have an ERM tool currently in release. However, with some of the recent mergers in the ILS market\(^2\), it will be interesting to see which of these tools will continue to be offered in the near future. These management tools help a library capture not only the payment and invoice information but also essential metadata elements relating to the licensing of products, such as whether the resource can be used in courseware/course packs, sent via inter-library loan, or who the authorized users of any given resource are.

In addition to the ILS vendors, other major market players such as subscription vendors and electronic journal management systems suppliers also have products available that aid with the management of electronic resources. Finally, it should be noted that there are still numerous home-grown ERM tools that have been presented in both library literature and at major library conferences, such as MIT’s Vera system\(^3\). These local systems have sophisticated interplay between the local library web presence and ILS system and capture much if not all of the same data provided by the vendor-created systems.

The resource to consult to find out what has historically been available, what tools are currently available and what the overall specifications are with regard to individual products, both commercially developed and developed in-house at various institutions, is the Web Hub for Developing Administrative Metadata for Electronic Resource Management\(^4\). Between this information and the charts covering ERM tool vendors provided by Ellen Finnie Duranceau in her articles in *Against the Grain*\(^5\), it is unnecessary to cover specifics of all of the products available on the market in this chapter. Suffice it to say that, when it comes to electronic resource management, there are many products all offering different management strengths.

What is most lacking in the discussion surrounding ERM is consideration of the two fundamental questions posited at the beginning of this chapter:

- What ERM issues is your organization hoping to solve?
- What in this implementation will make access better for the end-user?

The end-user is most concerned with having access and knowing that this access will be available when the need for it arises, and does not generally want to know how access is made available to these resources. In reading about implementations of institutionally developed ERM tools, what is readily apparent is that the data captured here is most relevant to the librarians, and the general use of most of the licensing metadata captured is used internally by other staff in the library. This is not to say that the capturing of this information is not important or relevant to the work we do with electronic resources. However, one thing to be aware of is that very little of this metadata is actually of use to the end-user. Many of the providers with which librarians sign agreements require the licensing organizations to provide this information to the end-user and it can be said that many librarians and organizations have not always been as strident about presenting this type of information as they should have been in order to dissuade unauthorized use of electronic resources. This begs the question as to whether the staff time expended on choosing and implementing an ERM tool is worth the benefits of having that ERM tool? This all depends upon a library’s strategic plan and what is seen as the cost benefit of such an implementation.

More and more, libraries have to prove their cost benefit to the populations they serve. This is especially true in higher education organizations. Therefore, it serves the technical services staff or the electronic management staff well to establish the implementation of an ERM tool in the context of the library’s overall strategic initiatives or plan. This should also help define what it is attempting to solve by implementation of the ERM tool and may even help define which tools a library should look at with regard to electronic resource management. For instance, if the problem that a library is trying to solve is that the electronic management sits outside the integrated library system and this is causing disconnection in the payment and processing of electronic resources, then a tool that is part of the integrated library system is all that needs to be considered. However, if the problem is that there is a disconnect between the payment of a resource and the activation of resources once payment is made, then a subscription vendor product such as EBSCO’s EJS\(^6\) may be the best tool to address this issue. Each library has the potential to establish a different set of needs that could be addressed by an ERM tool.
Librarians must start their review of ERM tools by performing a needs assessment and determining exactly what problems should be fixed or addressed. This may seem elementary but in fact much of the marketing around ERM tools presents them as a magic solution that will streamline and make all problems in relation to electronic resource management go away. Often what is needed is not only a management tool, but a re-conceptualization of the organization and methodology of handling electronic resources. The management of electronic resources is cyclical and, in turn, transformative of library operations. Instead of processing material in a linear fashion to end up in storage on a library shelf, librarians are constantly juggling access points and management of these access points from numerous directions. There is constant upkeep that must occur with each renewal, each title activation, each holdings update, each platform change, and each URL switch. To date, no one ERM tool actually does this work for a library. What the ERM tool does is bring together the discrete elements of information needed to make these processes easier. However, each system brings these elements together slightly differently so it is up to each individual library to determine which of the discrete elements are needed at their institution to make these processes work together.

One of the best ways to determine which tool is right for a given library is to examine the processes undertaken when electronic resources are processed and note each element that should be captured with current processing. When various ERM tools are reviewed, it should be checked to see if each of these elements is addressed by the system being evaluated. At the end of this chapter, a sample ERM tool comparison sheet is provided that can be utilized when the evaluation of these resources begins.

How do these tools help the end-user? At the most rudimentary level, they help standardize the way we talk about all electronic resources as well as standardize access to them. Up until now, there have not been standard ways to describe the elements of electronic resources, and librarians often use various versions of library jargon and lingo in the provision of these resources. One of the most essential benefits that the Digital Library Federation’s Electronic Resources Management Initiative accomplished is a set way of displaying and talking about electronic resources.

A good management tool will allow a librarian to pull items together into discrete packages as required by the end-user and to reformulate these packages as needed for each individual user that searches for content in a library’s online catalog or at a library’s web site. An even better management tool would allow librarians to enter data into one place and repopulate all the other places where the data may need to reside to provide access to resources. For instance, one should not have to input data about electronic subscriptions into one’s web OPAC and then re-enter some of the same discrete elements into one’s OpenURL resolver in order for access to be provided. The system should be able to cross-populate these two resources as needed and what may be found is that more than one tool or add-on module will need to be purchased in order to accommodate this type of cross-population of data. The best ERM tool would alert a librarian when content has changed, such as title changes, coverage changes, and/or platform/URL changes. The biggest benefit that an ERM tool should provide to the end-user is the seamless delivery of information from numerous points of access. Since the majority of ERM tools are in their infancy, this is the direction in which many of them are heading but no one tool is quite there just yet.

In conclusion, librarians should spend some time really evaluating what their needs are with regard to electronic resource management, and what tools will help them best capture all of the necessary data elements needed to process electronic resources in a timely fashion to keep access ever-ready and apparent to the end-user. The end-user is not really interested in how access to an electronic resource is provided; just that access is available from their organization when their needs arise. Thus, the potential benefit of ERM tools is how we can use them to our advantage in serving our patrons in a convenient and timely manner.
Appendix A.

### SAMPLE: Electronic Resource Management Tool Comparison Sheet

<table>
<thead>
<tr>
<th>System functionality</th>
<th>Product A</th>
<th>Product B</th>
<th>Product C</th>
<th>Product D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integrated with existing ILS?</td>
<td></td>
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<td></td>
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<tr>
<td>Only entering basic data elements once?</td>
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<tr>
<td>Provides e-mail ticklers from one process to the next?</td>
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<tr>
<td>Allows for multiple purchasing paradigms?</td>
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<tr>
<td>Does not require overhaul of current electronic resource processing?</td>
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<tr>
<td>Requires overhaul of current resource handling but has added benefits that make these changes worthwhile?</td>
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<tr>
<td>Seamless access provided to the end-user from multiple starting points?</td>
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<tr>
<td>Provides readily available messages about usage and outages to the end-user?</td>
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<tr>
<td>Based on DLF standards?</td>
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<tr>
<td>Integration of usage statistic information?</td>
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</tbody>
</table>

References

6. EBSCO EJS: http://www.ejournal.com
Biographical note

Jill Emery is currently Head Librarian in the Serials and Electronic Resources Department at the University of Texas at Austin Libraries in the USA. Prior to this position, she was the Director, Electronic Resource Program at the University of Houston Libraries. Jill has over 12 years of experience in acquisitions and working with electronic resources and holds an MLIS from the University of Texas at Austin. She is also Vice-President of the North American Serials Interest Group and has served as Chair of the ALA-ALCTS Serials Section. In 2004, she was recognized as one of Library Journal’s Movers and Shakers and in 2006 was awarded the Esther J Piercy Award by the ALA-ALCTS section for her contributions and leadership in library collections and technical services.