**Sort to Light**

***What is sort-to-light?***

Sort-to-light is a semi-automated sorting technology that allows libraries to ship materials without requiring a label to indicate the item’s destination.

Our studies indicate that elimination of this step shortens the time for processing an item for delivery at the circulation desk by one-third, i.e., a transaction with a label takes six seconds while a label-less transaction takes four seconds.

Sort-to-light technology is not new. It has been used for many years in other industries where it is also referred to as pick-to-light. This is the first implementation of sort-to-light technology in a library logistics setting. In MLS’s case it works thus: an employee (sorter) at the contractor’s distribution center opens a tote full of unsorted materials shipped by a library. The sorter scans a barcode located on the front of the item with a wrist-worn scanner. The scanner polls the shared integrated library system (ILS) at a remote site via the Internet. The ILS responds with a SIP2 message which indicates the destination for that item (similar to a transaction with a self-check station). An LED light flashes to indicate to the sorter into which tote in the sorting rack to place the item. This technology allows for the separation of materials by other characteristics, e.g., items “on-hold” versus “returns.” The sort-to-light technology employed for MLS includes error detection to improve sorting accuracy.

* For a video presentation of Optima’s operations, please go [HERE](http://www.masslibsystem.org/optima-sort-to-light-delivery-operations/)

***Why are we trying to end the use of labels?***

To make library processing more efficient and waste less paper. Our studies indicate that label-less sorting is one-third faster than label-based sorting. Each labeling transaction takes six seconds. Each label-less transaction takes four seconds. Over a year this saves over 8,000 hours of staff time annually across the Commonwealth.

In addition, it is greener. We estimate that Massachusetts libraries use about four inches of label paper for each of the 15 million items shipped annually. This is equivalent to more than 900 miles of label paper annually.

***When will my network convert to sort-to-light?***

SAILS was converted in 2010. Minuteman was converted in November 2011. OCLN and CLAMS were converted in January/February 2012. MVLC was converted in June/July 2012.

The following networks are scheduled to convert during 2012: CWMARS (target of Fall 2012)

FLO, NOBLE and MBLN are scheduled to convert in 2013.

We have not yet determined a schedule for MassCat.

***Please explain how the 75 percent threshold of items in delivery works. We heard that this is required for network participation in sort-to-light.***

When a network’s preferred start date for sort-to-light is approaching, Optima will sample materials that are shipped by that network’s members. Staff will count total items and the number of items with barcodes in the standard location. If the percentage of items with standard barcodes is at or above 75 percent of the total, then the network is eligible to implement sort-to-light. If the percentage is not at 75 or higher, the network is not yet eligible. We believe that all networks will reach this threshold eventually as older items are no longer shipped. This could take years, however. If the members of a network want to accelerate reaching the 75 percent threshold, they could begin retrospectively placing barcodes in the standard location by providing a method for this at delivery points that would affect the percentage, e.g., in the busiest libraries.

***Are there other requirements for a network to implement sort-to-light?***

There are two other important criteria. First, the network’s system must be compatible with Optima’s sort-to-light system. Usually this is easily accomplished with the SIP2 standards used by many self-check devices. The second is that all members of a network must comply with the statewide barcode placement policy for new materials.

***How will the implementation of sort-to-light be done?***

When a network reaches the 75% threshold of externally barcoded items, Optima will begin working with the network’s administration to establish the connection with the ILS. After the preliminary testing is completed, Optima will begin testing with selected libraries, gradually increasing the number of libraries being sorted with sort-to-light until all libraries within a network are “live”.

When your network makes this transition to sort-to-light, you will be able to put items that are externally barcoded according to the 2009 barcode policy into delivery without a routing slip. For items that do not have a barcode or the barcode is not in the proper place, you can still use routing slips to send the items through delivery For items with barcodes on the back, upper-left corner that pre-date 2009, you may place these items upside-down (so the barcode is visible) instead of using a delivery slip. For additional information, please refer to the [Barcode Placement section](http://www.masslibsystem.org/delivery/faq/#ten) of the FAQ.

***If a library puts an item into a delivery bin that should have been kept in their library on the Hold shelf for a patron, what will happen?***

The item will get sorted back to that library. The system information doesn’t change, so the system thinks that the item should be at the library awaiting a hold. The system tries not to assume too much so this falls within the design for lack of information. The system is designed to default to the hold location in this event.

***What happens if an item in the bins is not in an In Transit status when it is scanned by Optima?***

It depends. In general one of two things will happen to it:

1. It will go to the intended library.
2. It will go to its home library (without the destination info and the system defaults to the home library).

The ultimate destination will depend upon the item’s current status. For example, if the item is supposed to be on hold at a particular library, it will default to that library (see question above). If the item is supposed to be on its home library’s shelve and was mistakenly put into delivery, it will default to the home library.

***What happens if an item in the bins is in transit to a different network via the Virtual Catalog?***

Items leaving to go to a library participating in the Virtual Catalog would read as In Transit to the location “URSA”. These items will require a transit slip in order to determine destination.

Virtual Catalog labels alone do not provide enough information for sorters to determine an items destination. When sending items outside of your network via the Virtual Catalog or “point to point” please remember to use a MLS delivery [Routing Slip](http://www.masslibsystem.org/wp-content/uploads/2010/07/routingslips.pdf)

Also remember to use the MLS [Delivery Index](http://www.masslibsystem.org/blog/2011/10/11/mls-offers-subsidized-lyrasis-courses/) to correctly label items

For additional information on Virtual Catalog items, please refer to the [General Delivery questions](http://www.masslibsystem.org/delivery/faq/#one).

***My library has branches. Will Optima be providing sorting and delivery for my library’s branches?***

Your library is responsible for inter-branch shipping. Once a Network transitions to sort-to-light, Optima will provide sorting for library branches to be delivered to the Main library. It is then the responsibility of the library to provide inter-branch delivery of its items.

Additionally, your library will still be responsible for sorting internal materials destined for one of your branches. Optima is only responsible for branch sorting of items traveling through its sort facility from other libraries.