BloodNews
United Blood Services

News & Information
for our Hospital Customers
October 2006

"What Do We Need to Buy for ISBT 128?" part 2

Purchasing an ISBT 128 Scanner

By Bruce Wray, Computype
Special to BloodNews

Next June, United Blood Services will begin shipping blood products with the new *ISBT 128* labeling. *ISBT 128* will become the new required standard for blood labeling throughout the United States, effective May 2008.

In the early months of the transition much attention has been focused on generating these new labels at the blood center. As implementation draws nearer, it's time to pay attention to how the labels will be scanned by the end-user: the hospital blood banks and transfusion services that have the critical job of getting the right unit to the right patient at the right time.

United Blood Services' comprehensive ISBT 128 Implementation Guide is on our Web site: www.UnitedBloodServices.org. Click on the Hospitals & Physicians tab and choose ISBT 128 near the bottom of the left-hand column. Hard copies of the guide are available from United Blood Services.

There's a bewildering array of bar code scanners on the market right now, so educating yourself about the costs and features that might be important to your institution makes a lot of sense. Let's take a look at what you might need in a new bar code scanner.

If you're familiar with the new labeling standard, you know that there's only one critical difference between Code 128 and *ISBT 128* that might have an impact on the scanner you purchase: concatenation. Concatenation is the joining together of the data contained in two adjacent symbols on the blood container prior to transmission to the host computer system. The concatenation outlined in the *ISBT 128* Application Specification was designed for process control—a way of ensuring the correct label is applied to the correct unit.

The idea of timed concatenation goes back to when all scanning was done with wand scanners. In the case of CCD and laser scanners, the scanner will concatenate if both of the required symbols are in the field of view at one time providing a further protection from inadvertently scanning a symbol from one blood bag and another symbol from a second bag.

ISBT 128 creates a special timed concatenation routine that, when activated, uses an internal clock in the scanner that allows only a prescribed amount of time to elapse between the end of the scanning of one symbol and the beginning of the scanning of the next symbol—thus ensuring that the symbols are indeed adjacent on the bag and not from two separate bags. Pairs of symbols most often concatenated are DIN + ABO, as well as product code + expiration date.

If you're NOT going to use the timed concatenation feature in *ISBT 128*, then any bar code scanner that reads Code 128 will also read *ISBT 128*. Your selection should be made on the basis of ergonomics, cost, and durability.

If you ARE going to concatenate, your scanner choices are limited. While many scanner manufacturers indicate one or more of their products will read *ISBT 128*, that does not mean they will do timed concatenation. For example, entering *"ISBT 128* bar code scanner" into the Google search engine results in 23,900 hits, many from a company that does not have any products that will do timed concatenation based on the *ISBT 128* requirements.

One company that does provide a concatenating scanner is Hand Held Products; their Models 4600 and 4620 handheld imagers can do timed concatenation. One model is wired, the other is wireless.

Continued on page 2 >

United Blood Services Keeps PACE® with Continuing Education

United Blood Services' PACE®-accredited programs help staff at the hospitals we serve stay up-to-date on continuing education requirements and current topics in blood banking. During the first three quarters of 2006, 504 employees at 84 hospitals throughout United Blood Services' 18-state network completed 1159 PACE® courses. Topics included antibody detection and identification, indications for transfusion, quality control and transfusion for the clinical nurse.

For the latest PACE® programs, case studies and other education opportunities, visit www.UnitedBloodServices.org, click on the Hospitals & Physicians tab and look for Educational Opportunities and Resources in the left-hand column. (While you're there, check out our Transfusion Medicine Bibliography.)

BloodNews is published by United Blood Services for the hospitals we serve. Media inquiries can be made to Barb Kain at (480) 675-5664. The United Blood Services network is one of the nation's oldest and largest non-profit blood service organizations, and is a founding member of America's Blood Centers and the AABB.

ISBT 128 Scanners

Continued from page 1

The important lesson is this: verify that the scanner you're considering will in fact do the timed concatenation that *ISBT 128* outlines. Try before you buy.

Once you've made the concatenation decision, there are three types of bar code scanners from which to choose: contact wands, CCDs, and lasers.

While contact wands are not as commonly used in the blood bank community, they are still a viable and cost-effective option. Wands are available from non-decoded models that require a separate decoder to wands with wedge or USB output. Because wands are priced so low, it is unlikely that manufacturers will invest in the software for timed concatenation. Host software can be written to "simulate" the timing required to verify adjacent symbols have been decoded.

While there are many manufacturers and resellers of ISBT 128 printers and scanners, United Blood Services can provide the names of two sellers as a starting point:

Computype Corporate
2285 West Country Road C
St. Paul, MN 55113-2567
(800) 328-0852
Fax: (651) 633-7122
www.computype.com

Digi-Trax Corporation Sales West
13017 Artesia Blvd., Suite D-122
Cerritos, CA 90703
(310) 508-3977
Fax: (720) 559-4387
Chicago, IL Corporate Office
(800) 356-6126
www.digi-trax.com

Other options include the low-cost contact and near-contact scanners. Called CCD scanners (for charged-couple device), they are similar to a single-line video camera. They take many flash pictures per second, if you will, of the bar code symbol, when brought close to the label. Training is easy—"just touch the bar code"—and the devices are very inexpensive and durable.

Other CCD scanners with more sophisticated optics allow the scanner to be up to several inches away and read the symbol accurately. Either contact or near-contact CCDs can be hand-held or mounted on a hands-free stand for greater flexibility. Fixed mounted readers are also available and are used in a presentation mode where the bar code is brought to the scanner.

The third type of scanner is the laser, generically referred to as handheld, moving beam scanners. The scanning motion in these devices is provided by revolving or oscillating mirrors; typical scan rate is about 40 scans per second. Many laser scanner beams read the symbol with a raster pattern, which means the user just points and shoots while the moving dot of laser light simultaneously moves across and up-and-down the symbol. Advantages of this technology include relative ease of training, the ability to scan symbols from a distance, and the ability to move quickly from symbol to symbol. Because of their moving parts and sophisticated optics, these scanners are slightly less durable and more expensive than CCDs. Typical prices for handheld laser scanners range from about $450 to more than $1000.

Now, a final detail, and it's important. The key to *ISBT 128* is the use of data identifiers—unique characters that appear at the beginning of every bar code symbol which describe the type of information encoded in that symbol. To derive full benefit from the new labeling standard, it is imperative that no scanning device in the blood bank strip off or ignore these characters. Host software should be written to utilize these data identifiers as additional checks that the correct symbol has been scanned.

Component Spotlight: FP24

Plasma frozen within 24 hours after phlebotomy (FP24) is a blood product approved for manufacture by the FDA (21 CFR 640.120) and is a comparable alternative for the clinical uses of fresh frozen plasma (FFP), according to the Circular of Information and the AABB Technical Manual.

Overall, FP24 is an appropriate blood product for all indications of FFP and has been successfully adopted by more than 50 percent of hospitals nationwide. AABB standards indicate that thawed plasma can be converted from FFP or FP24. Thawed plasma can be and has been used interchangeably with FP24 and FFP for most clinical indications, but most experts agree it is not indicated in neonates with coagulopathies. FP24, like FFP, should not be used to treat disorders requiring replacement of factor VIII only.

Customer Service Earns A-

The results from this year's hospital satisfaction survey are in and customers in the 18-state United Blood Services network rated their overall satisfaction with our service at 8.9 on a 10-point scale, with 46 percent of respondents giving us a perfect 10 out of 10. (Another 52 percent gave us an 8 or a 9.)

We received completed surveys from 299 of the 550 hospitals we serve.

The areas that scored highest on the survey were product availability (9.2) and the professionalism of our staff (9.4). Survey results show that we have room for improvement in platelet availability (8.8) and in timely reporting of reference laboratory results (8.0). We have improvement projects underway in both of these areas and will keep you posted on our progress in the coming months.