Opportunities for UPC Product and Service Suppliers:
The Wood Products Industry

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Overview

Universal Product Code (UPC) bar coding by the wood products industry is being driven by home center customer objectives to increase efficiency, profitability and competitiveness through point-of-sale scanning. Home center suppliers have been encouraged to make the transition to adopting this technology or face the prospect of being replaced by UPC capable competitors. Accordingly, wood products suppliers have begun the process of adopting UPC capabilities to serve the home center customer base. UPC bar coding is considered to be increasingly important in the wood products industry as a means to penetrate the home center market segment or maintain existing market position.

A survey of 154 UPC bar code product and service providers in the U.S. was conducted in the Spring of 1993 with the following objectives: 1) to assess the status of their participation as suppliers to the wood products industry; 2) to determine criteria that wood products manufacturers and distributors use in selecting UPC bar coding suppliers and; 3) to identify opportunities in the wood products industry for UPC product and service suppliers.

UPC Suppliers To The Wood Products Industry

Twenty-seven companies indicated that they sold UPC bar code products to the wood products industry in 1992 which concurs with the wood products manufacturer and distribution intermediary respondents in the study reporting that 22 UPC providers supplied all their needs in 1992. Wood product industry sales accounted for an average of 12.3 percent of all corporate sales for these 27 respondent companies. An additional 15 companies indicated that they plan to target the wood products industry by 1995.

Suppliers in all wood products industry sectors, from the largest timbers to small lengths of wood moulding are complying with customer requirements to bar code. UPC supplier respondent companies which are beginning to take advantage of this enormous opportunity indicated that they sold UPC related products to all wood product sectors researched in the study.

Primary opportunities for UPC product suppliers are in printer and applicator sales and service. Figure 1 shows that thermal transfer printing technology accounts for 69 percent of all printer sales by respondent companies and 80 percent of printer sales to the wood products industry. Wood products respondents indicated that thermal transfer printing will continue to be the preferred method in the future as well due to its capability to produce labels that stand up well to the harsh conditions inherent in wood products manufacturing and distribution environments.

[INSERT FIGURE 1 ABOUT HERE]

Sales of UPC bar code application products to the wood products industry is becoming increasingly important relative to total sales for many providers (figure 2). Most wood product automated applicator (both pre-printed and print-and-apply) sales have been to panel-based industries (softwood plywood, particleboard and OSB/waferboard). Print-and-apply applicator sales have generally been limited to the softwood lumber industry but, because of

inconsistent reliability and inadequate technical designs, sales are limited. The high number of reported handheld applicator sales to the wood products industry (708) are generally non-mechanical wipe-on types of applicators.

[INSERT FIGURE 2 ABOUT HERE]

Average prices for printers and application methods most used in the wood products industry can be seen in figure 3. While prices for thermal transfer printers and pre-printed label/tag in-line applicators are reflective of what a wood products manufacturer or intermediary can expect to pay, average prices for print-and-apply applications and handheld (pneumatic tag/staple) applicators modified or developed specifically for wood applications were found to be approximately $40,000 and $2,500, respectively. Pricing on high demand application systems, particularly pre-printed and handheld pneumatic label/tag applicators will decline as competitive pressures to service this growing market increase.

[INSERT FIGURE 3 ABOUT HERE]

Wood Products Customer Satisfaction

Tables 1 and 2 show mean responses of questions posed to UPC product suppliers regarding how they perceive customer satisfaction and ease of application in the wood products industry to be. Questions were answered using the following 5-point scale indicating varying levels of agreement: 1=strongly disagree to 3=neither disagree or agree to 5=strongly agree.

[INSERT TABLES 1 AND 2 ABOUT HERE]

Tables 1 and 2 show that the level of customer satisfaction, as perceived by suppliers, relates directly to the level of success that UPC product suppliers have found in developing

application methods suited to the wood products industry. Pre-printed label applicators have required nearly no modifications to meet wood product customer needs and pneumatic handheld tag/staple applicators are also well suited to customer needs. The scores of 3.0 for customer satisfaction (table 1) and 2.8 for ease of adapting technology (table 2) for print-and-apply applications are indicative of the problems that been encountered in developing systems that work well in mill environments.

Reasons to Target the Wood Products Industry

Table 3 shows that UPC bar code product suppliers target the wood products industry for many reasons although response to customer (or potential customer) requests was the most important reason. Expansion of the customer base is also an important motivator as UPC suppliers attempt to develop expertise in servicing a new and potentially significant customer base.

[INSERT TABLE 3 ABOUT HERE]

Wood Products Company Criteria in Selecting UPC Bar Code Product Suppliers

As seen in table 4, wood products respondent companies that UPC bar code are concerned with product reliability and quality as well as a high level of technical support and service from their UPC product suppliers. Because UPC bar coding of wood products is still in the early stages for many producers, there is less concern with price, brand reputation or a UPC suppliers commitment to the wood products industry. Wood products customers want a product that works within specified parameters and a high degree of support and service.

[INSERT TABLE 4 ABOUT HERE]

Summary

UPC bar coding solutions for wood products applications continues to evolve, albeit slowly. In-line automated UPC application systems that use pre-printed labels are a proven technology although print-and-apply in-line systems continue to be unreliable and inconsistent. Because of the expense involved with in-line systems, many wood products suppliers have turned to pneumatic handheld tag and staple applicators or manual (peel and stick) application.

Twenty-seven UPC product and services companies (47 percent of all respondents) indicated that they sold products to the wood products industry in 1992. However, many have not been successful in developing solutions to meet the unique challenges in UPC bar coding wood products as indicated by only four companies dominating UPC products and services sales to respondent wood product suppliers.

Demand for UPC bar coded wood products by the home center retail industry is projected to increase significantly over the next three years creating significant opportunities for UPC product and service suppliers. The keys for success are 1) to develop an understanding of the special requirements and constraints of the wood products industry and; 2) to commit to developing unique and workable solutions to meet these challenges.

Figure 1.

Percentage of 1992 bar code printer
total sales by printer type.

(Percent Printer Sales By Respondent Firms)

(n=44)

Thermal Transfer   69.0%

Direct Thermal   20.5%

Dot Matrix 1.3%

Laser 9.0%

Inkjet 0.2%

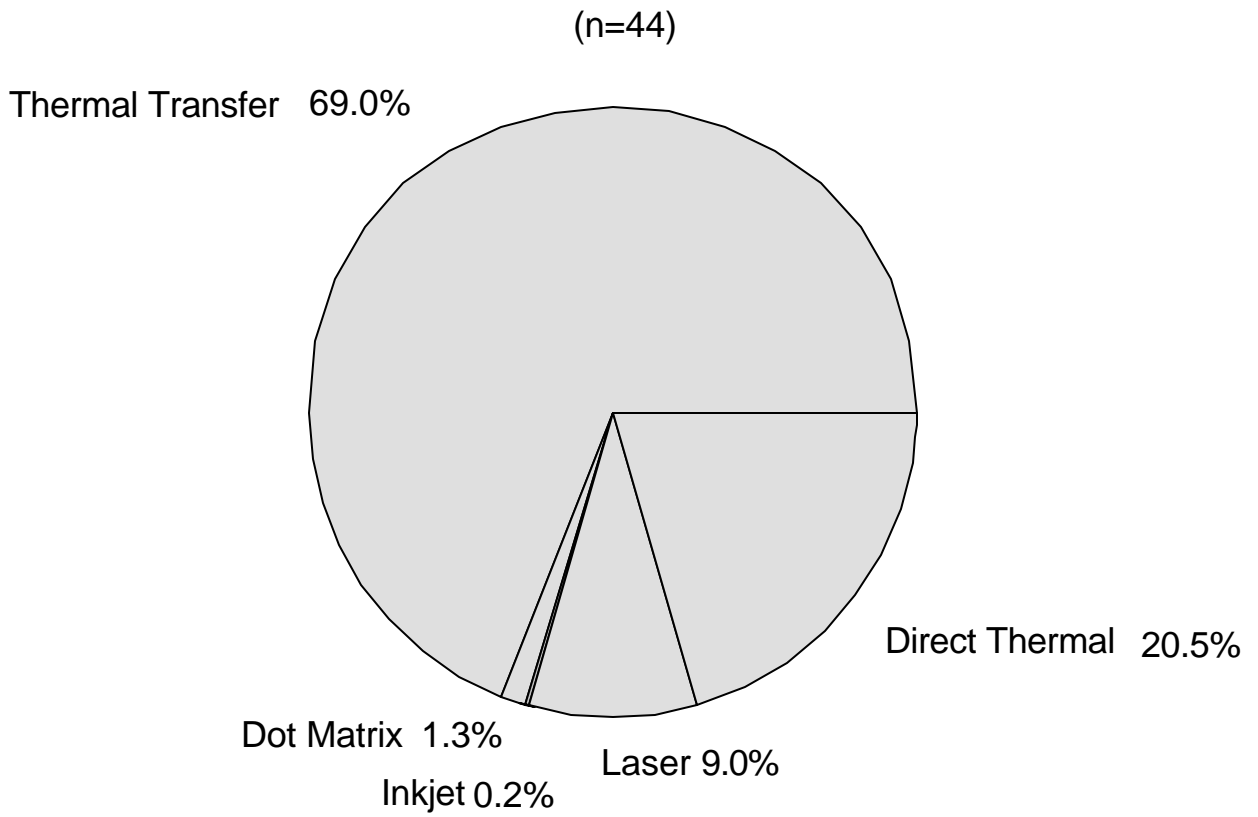**Figure 1.**

Percentage of 1992 bar code printer sales to the wood products industry by printer type.
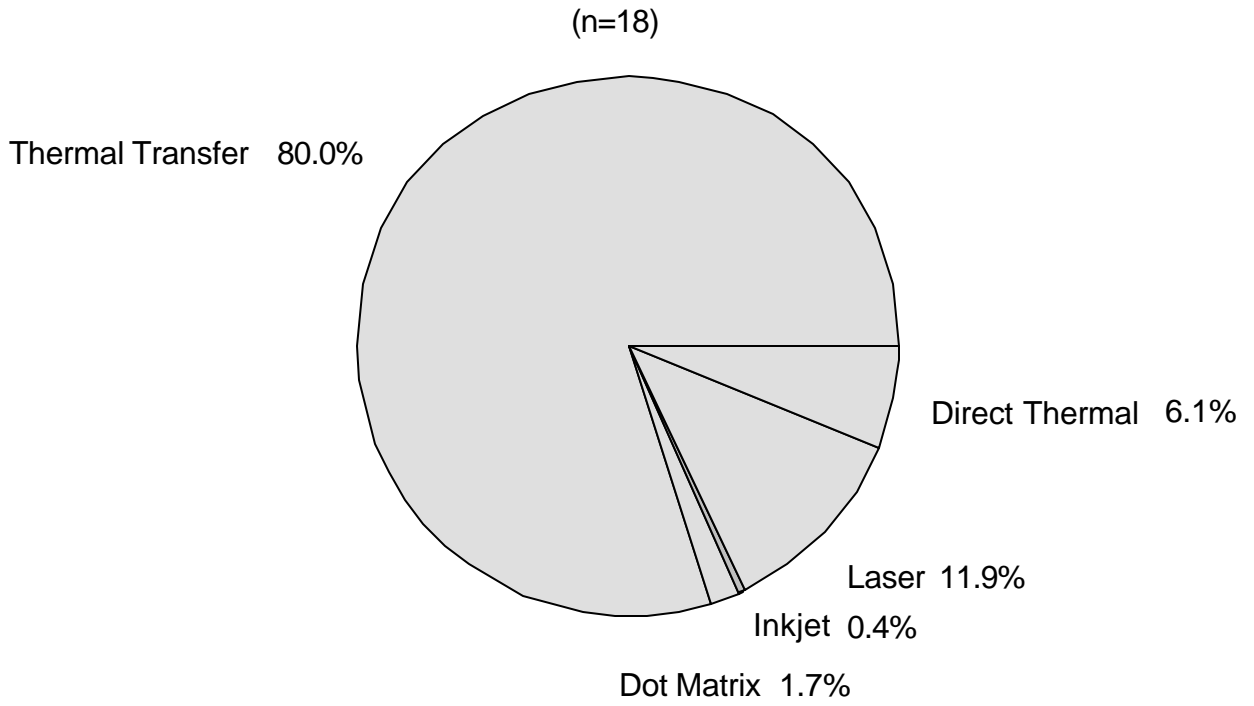
(Percent Printer Sales By Respondent Firms)

(n=18)

Thermal Transfer   80.0%

Direct Thermal   6.1%

Laser 11.9%

Inkjet 0.4%

Dot Matrix 1.7%

Figure 3.

Average 1992 prices for printers and applicators.
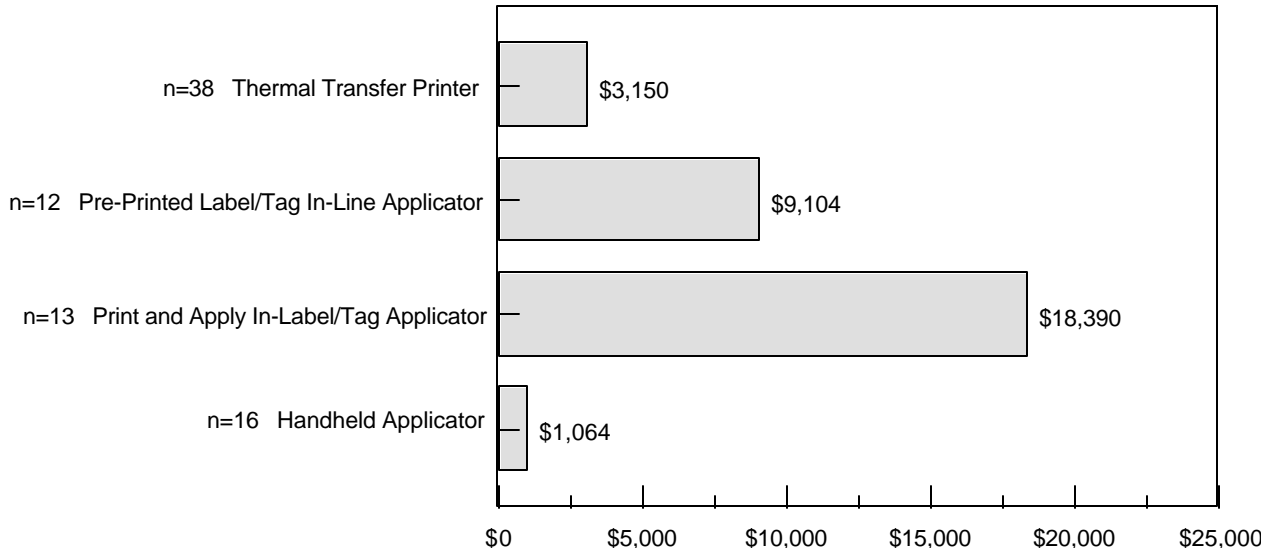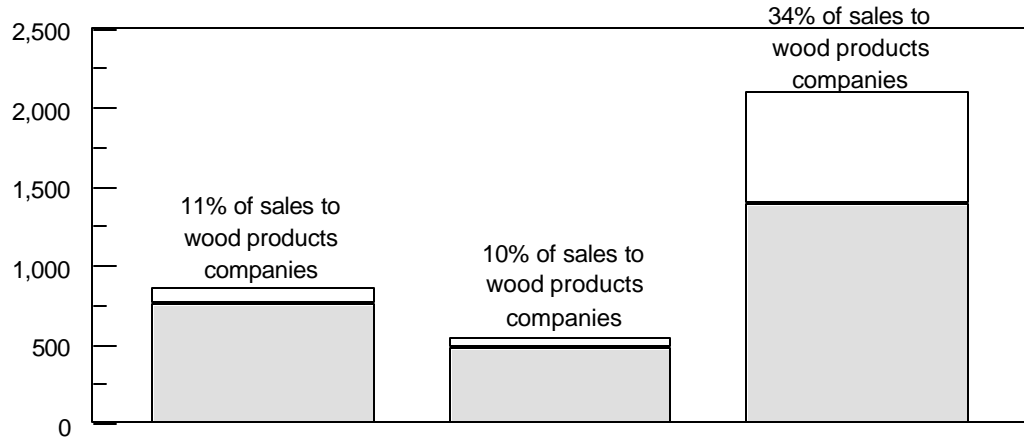
(As reported by respondent companies)

Figure 2.

UPC Products Suppliers
1992 Applicator Sales
(Sales of Respondent Firms)

	Pre-Printed Label/Tag In-Line Applicator	Print and Apply Label/Tag In-Line Applicator	Handheld Applicator
Sales to all other industries	767	487	1,390
Sales to wood products companies	98	57	708
	n=12	n=13	n=16

Table 1. Customer Satisfaction With Application Methods as Reported By UPC Product Suppliers

Our wood products customers are generally satisfied with our...

	Unweighted Mean
in-line pre-printed label/tag applicators n=12	**3.9**
in-line print and apply label/tag applicators n=13	**3.0**
handheld label/tag applicators n=16	**3.8**

Table 2. Ease of Adapting Application Methods For The Wood Products Industry

The following products were easy to adapt to wood products applications:

	Unweighted Mean
in-line pre-printed label/tag applicators n=12	**2.9**
in-line print and apply label/tag applicators n=13	**2.8**
handheld label/tag applicators n=16	**3.5**

Table 3. Reasons To Target The Wood Products Industry

Our company decided to target the wood products industry in order to...

		Unweighted Mean
respond to customer requests.	n=17	**4.4**
expand our customer base.	n=17	**4.1**
position the company for the future.	n=17	**3.8**

Table 4.   Ranked Criteria for UPC Bar Code Product and Service Suppliers Rated by UPC Bar Coding Wood Products Manufacturers and Intermediaries

	Mean (n=75)
Product reliability	4.7
Product quality	4.5
Vendor technical support	4.4
High level of overall customer service	4.4
Fast response to inquiries	4.2
Vendor reputation	4.1
Knowledgeable sales people	3.8
Price	3.7
Perceived commitment to the wood products industry	3.6
Brand reputation	3.0
Referred by customer(s)	2.8
Geographic distance to the supplier	2.6
Payment terms	1.8
Credit terms	1.8