

APPENDIX E

Cash Handling Equipment OEM Survey Questionnaire

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Of those currencies produced throughout the world there are four rough categories of features that have been added to currency with the intention of assisting the blind and visually impaired to differentiate note denominations.

- Different primary colors either on the same note or between denominations.
- Different sizes for different denominations of notes.
- Tactile features that include enhanced intaglio (or other) printing, perforations, and embossed features.
- Certain oversize numerals.

General Questions regarding categories of features:

1. Does your organization currently manufacture equipment that is capable of processing currency that includes feature for the blind?
2. Please explain which features your equipment can handle (if applicable include features not listed above).
3. Which of these categories of features present the greatest technical challenge to the vending community on a domestic level (rank from greatest to least)? Why?
4. Which of these categories of features present the greatest technical challenge to the vending community on an international level (rank from greatest to least)? Why?
5. Which of these categories of features present the greatest challenge to the vending community from a cost perspective on a domestic level (rank from greatest to least)? Why?
6. Which of these categories of features present the greatest challenge to the vending community from a cost perspective on an international level (rank from greatest to least)? Why?
7. Would any of the features listed above result in higher ongoing maintenance costs compared to others? Why?
8. In terms of machine recognition of currency, are any features anticipated to be problematic in new banknotes?
9. In terms of machine recognition of currency, are any features anticipated to be problematic when banknotes are showing signs of wear (durability issue)?
10. Do you anticipate using aspects of feature for the blinds for machine recognition of banknotes? To which feature for the blind categories might this apply?
11. Is imaging the predominate technology used to identify US currency?

12. If new equipment or software changes are needed due to a change in the currency, fill in the table on the following page to estimate the average time for to prepare for each category of feature.

SCOPE OF CHANGE	FEATURE CATEGORY	DESIGN LEAD TIME	CUSTOMER LEAD TIME	IMPLEMENTATION PERIOD	COMMENTS*
SOFTWARE	COLOR				
	DENOM SIZE <u>CHANGE IN LENGTH</u>				
	<u>CHANGE IN WIDTH</u>				
	TACTILE FEATURE				
	OVERSIZED NUMERAL				
HARDWARE	COLOR				
	DENOM SIZE <u>CHANGE IN LENGTH</u>				
	<u>CHANGE IN WIDTH</u>				
	TACTILE FEATURE				
	OVERSIZED NUMERAL				

*If an average time exceeds 6 months, please elaborate on the reason.

Questions Regarding Specific Categories of features:

TACTILE:

13. From a processing perspective, if tactile features were introduced, is it more difficult to engineer if the feature were on one side of the note or both sides of the note? Why?
14. What limitations are there on the thickness or stiffness of materials handled?
15. Considering deep embossing of notes (similar to a Braille structure), what is the note thickness restriction of the cash machine?
16. Are there any internal mechanics (rollers, etc.) of the machine that would degrade a raised substrate structure? If so, in what area of the note would this occur?
17. What would be the effect on the machine if banknotes had a raised structure that resulted in a taller stack for a given number of notes? What if the stack was uneven?
18. If such a feature were pursued, are there other limiting factors that have not been included in the previous questions?

DENOMINATION SIZE:

19. What is the magnitude (e.g., percent of price, similar type factor) of hardware and software changes required for note size changes in 1) length, 2) width, 3) both length and width? Why?
20. If so, is there an average price for a machine that can handle variable length & width, or is there a % factor cost increase over standard note size machine?
21. What currency sizes can your equipment currently handle?

Additional General Questions:

22. Would it be beneficial to your organization to be informed in the early stage of the design/development process of the potential feature that may be added to US currency?
23. What amount/frequency and type of communication from the BEP would be beneficial to your organization?
24. Would a semi-annual information exchange meeting be beneficial to your organization?
25. About how many of your machines are in active use in the US at present?
26. What is the forecasted annual rate of sales change (increase or decrease) anticipated for your market sector?
27. What is the average life of the machines? Do most of your customers have regular equipment replacement/technology upgrade programs?
28. What is the average annual maintenance cost (e.g. % of price, similar type factor)
29. Does your equipment accept notes with a wide edge or short edge leading?
30. Do your machines require a specific note orientation? If so how many models require it?