DAISY AS AN INTUITIVE AND INTERACTIVE TECHNOLOGY

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ABSTRACT
Making market stands more accessible by using DAISY-technology, vendors can easily catalogue their products each week and use our services to fully automatically generate a DAISY book that contains the product-list that can be downloaded thereafter by interested users as a podcast. Additionally, a market stand can use RFID-technology to make the available products easily identifiable.

1 The Problem
I am almost blind and when I go to the market, I always have the problem of having absolutely no clue, what kind of delicious vegetables, fruits and other foods are actually for sale. When I ask directly for something in particular, I often get the answer that the season for it is already over or has not yet begun. Thus, my shopping usually is limited to a small set of core items that I know by heart. Because my sight was better in the past, I do remember the benefits of being able to select from the full assortment. Having this in mind, the idea to generate a list of all available products sprang into mind. This list would bridge the gap of information.

Since our company is developing a large variety of assistive devices and technologies, it appeared only natural to combine several of these technologies to find a solution for this problem. Would it not be comfortable to be able to browse all available products sorted in a DAISY structure, all in neat categories like “fruit”, “vegetables”, “oils”, “nuts”, etc.? And would it not be comfortable to receive this list on your computer fully automated so that you could optionally listen to it on your MP3-Player or mobile phone?

2 Our Solution
Since we already had the technology for automated DAISY-fication of newspapers and their automated distribution, the “talking market stand” was not that far off. Our solution works like this: Take for example Harry, our prototypical vendor of biological goods at the market. He will serve us to demonstrate how our solution will work for both vendors and customers.

2.1 For the vendors
Harry needs to load his transporter. He uses his netbook to keep track. He needs to punch in a few numbers, e.g. “61” for his self-grown cherry tomatoes. If he does not enter a price, last week’s price will be used. Entering the currently available range of products takes almost no time at all.

When Harry has finished, he presses a key to send the data via FTP to our DAISYMax-server. DAISYMax is the server-component of our program Max The DAISYMaker. DAISYMax converts the data into DAISY and copies the finished DAISY-book to a server.
2.2 For the customers

Our program AudioSafe can download the freshly generated product-list as a podcast from the server onto your PC on each market day. From here, there are several possibilities to continue:

You can open the DAISY book with a DAISY-player on your PC and get information on the available goods. If you use Max The DAISYPlayer, you can set bookmarks for each product of interest and print your shopping list in either Braille or normal script. Instead of taking a printout, you could also send it directly to Harry's mobile phone.

If you connect a MileStone player or any other mobile DAISY player to your PC, AudioSafe will copy the DAISY book containing the product-list automatically to your playback device. On your way to the market, you could listen to the list. Using the software DAISY2Go, you could also use a mobile phone to do so.

By the way, this is organized in a way that products will be sorted by product groups but also appear in an alphabetical list that contains every item. Additionally, products that are new in the list have their own branch in the DAISY XML tree. Because the data is originally generated from a database-format, Max the DAISYMaker can generate every desired format. Usually, the name of the product will be followed by its price. Then there will be additional product descriptions that can easily be skipped when using a DAISY player. Thus, you can navigate through the whole line-up quite quickly.

In order to inform yourself on the range of products while standing in front of it, without using any technical equipment that you brought yourself, there is the option to use a variant of our RFID-based system Tag It. Here, plastic replicas of the products are tagged with RFID-chips. For example, you could hold an apple made of plastic in your hands. The market stand would have a RFID reader, which you could use to scan in this apple. Tag It would then tell you the name and price of the product and optionally give you further product descriptions.