The system displays the recipe text in the left panel and the extracted ingredients in the right panel. The first step is to select the regions of text containing the ingredients (in this recipe, 3 ea adult ~ bulb of garlic). This is done by the human, and the system subsequently shows only the text in these regions. Working from these reduced texts, the human then manually selects ingredient names and the system stores the accumulating list of ingredients in the database. After an initial cold start, the system partially extracts ingredients based on the human's choices and gradually improves its performance over time. Figure 2 shows examples of automatic extractions.



(c) Annotation of the ingredients

Figure 1. Ingredient extraction from recipe text

1 lb asparagus, trimmed/chopped asparagus b constanch salt b lack pepper b lack pepper b constanch ast b lack pepper b lack pepter b lack pepter

2	Recipe Input	- 0 -
	1 pastry for 9° pie 1 lb asparagus in 1-1/2° pieces 1 c jarisberg chese,shredded 3 tb pimiento strips 2 tb constarch 1/2 ts salt 1 nn black pepper 1 1/2 c half-and-half 3 eggs.alphdty baten 1/4 c parmesan cheese,fresh grated	pastry asparagus cheese pimiento constarch salt black pepper half-and-half eggs permesan cheese # of Ingredients = 10
	E Recipe Input	- 0 ×
	1 tb com oil 1/2 c silced mushrooms 1/4 c cinc, cossidy chopped 1/4 c cinc, cossidy chopped 2 c tomators, chopped 1/2 to bail, dired 1/4 to black pepper 1 lb cod, cut into 1* cubes	Con oil mushooms mushooms mushooms tomstoos basil blok, pepper cond cod ∉ of Ingredients = 8

Figure 2. Examples of automatic ingredient extraction from recipes using the database (blue indicates that the ingredient's name contains two words)

TABLE 1. AN EXAMPLE CONVERSION TABLE FOR "AV	/OCADO"

Name	Replacement
avacado	avocado
avacdos	avocado
avacodo	avocado
avocadas	avocado
avocado	
avocados	avocado