

Posters from Section V

Data base retrieval languages for food component databases: rationale for the design of Languag. Michele R. Chatfield.

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The design of a language to store and retrieve information about foods is of critical importance in the total database design. A language that captures relevant details of food components, i.e. fully describes the food indexed, is a necessity for relevant retrieval. This paper will discuss the development of the Languag food description language, including the rationale for a faceted/factored classification, the hierarchical design, how relevancy is defined and ensured in the language and the continuous improvements made in the vocabulary. This paper will focus on the information storage and retrieval for food databases rather than the content of these databases. Database retrieval will be discussed in terms of searching for foods with common ingredients or other common factors of health or dietary importance. As Languag is a controlled vocabulary, contrasts will be made with databases that feature sequential look-up and/or free-text searching and the value of a controlled vocabulary will be highlighted.

The EuroNIMS Food Information Management System/ Computer demonstration. T. Arnouts.

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The EuroNIMS food information management system is being developed in a multinational collaboration to provide comprehensive facilities for the recording, documentation and evaluation of food composition and other food-related data; the system will be demonstrated. EuroNIMS handles analytical, calculated and imputed compositional values. A range of information on food items is supported including text documentation and images, with the handling of multiple grouping systems and food description using Languag currently under implementation. Sources for all EuroNIMS data are identified at the organisation and country/international levels for use in data interchange. Exchange is also aided through the multinational collaboration involving participating institutes from many European countries and the commonality of the data handling procedures implemented. The system is multilingual both in data storage and the user interface. It uses a client server architecture to provide multiplatform operability, with storage using a proprietary DBMS.

The first release of EuroNIMS was made in November 1994 and a full version, EuroNIMS 1.0, is nearing completion.

Documentation of analytical values in a food DBMS/ Computer demonstration. T. Arnouts *et al.*

The types of documentary information supporting analysed compositional values for foods in the EuroNIMS food information management system are demonstrated and reviewed. Food items can be assigned to categories such as basic food, dish, additive or other industrial ingredient, and further described using text and images. Detailed descriptions of the analytical method can be recorded and linked to records for standard methods. A notation for showing multistep procedures in a concise text string has been developed. Methods and their variants can be organised hierarchically using the generalised grouping system support to be implemented in EuroNIMS. Information on the analysing laboratory can be stored. Further possible enhancements to the handling of analytical results documentation will be discussed.

Languag: international organisation. J. Ireland-Ripert,^{a*} & A. Møller.^b

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Languag is an international, descriptive coding system for foods, based on the principle of a faceted thesaurus, where each food coded is described by a set of standard terms grouped in facets. Languag is the only generally recognized method in common use for describing, capturing and retrieving data about food, adapted to national food composition and consumption databanks.

The International Languag Steering Committee is composed of permanent members representing core organizations, and rotating members representing projects with an eventual finite lifetime. At present, the permanent members are:

U.S. Food and Drug Administration (FDA-CFSAN)
U.S. Department of Agriculture (USDA)

Observatoire des Consommations Alimentaires—Centre de Recherche pour l'Etude et l'Observation des Conditions de Vie (OCA-CREDOC)

Centre National des Etudes Vétérinaires et Alimentaires—Centre Informatique sur la Qualité des Aliments (CNEVA-CIQUAL)

Ministry of Agriculture, Fisheries and Food (MAFF)

University for Horticulture and Food Industry of Budapest

International Agency for Research on Cancer (WHO-IARC).

The European COST project 'Food consumption and composition data' is a rotating member.

The Steering Committee accomplishes much of its work through two regional Technical Committees, one in the United States and one in Europe. The Technical Committee has an open structure, with core members responsible for the maintenance and updating of the Languag descriptor system and invited experts. Special interest groups on different topics are formed as need arises.

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KBS — A Norwegian diet calculation system for professional use. Bodil Blaker^{a*} & Elin B. Løken.^b ^a*National Nutrition Council, Box 8139 Dep, 0033 Oslo, Norway.* ^b*Section for Dietary Research, Box 1117 Blindern, University of Oslo, 0317 Oslo, Norway.*

A diet calculation system is being developed as a Windows client/server application by the National Nutrition Council (NNC), the National Food Control Authority (NFCA) and the Section for Dietary Research (SDR) at the University of Oslo.

The food database comprises approximately 1000 food codes (raw as well as cooked food items, manufactured products, recipes for home-made dishes). The nutrient values are based on the NNC food composition table 1991. The system may also use analytical values from NFCA for food additives and contaminants.

The intake of foods, specified food groups, energy, nutrients and non-nutrients may be calculated from individual diet questionnaires, recalls and records. The system tabulates the intake for individual subjects or for groups of individuals as average, SD, min, max and specified percentiles, and as amounts per day, week, year or kg body weight. For the food additives and contaminants the system may also use analytical values to estimate worst case intakes as well as to simulate intakes in a selected group.

A group of subjects may be selected according to their ratio between calculated intake of energy and estimated BMR, meal specific variables or specified intakes. Comparisons with recommended dietary allowances or other cut-off values may also be performed.

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Nutritional surveillance by the National Nutrition Council, Norway. Arnhild Haga Rimestad* & Bodil Blaker.

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The National Nutrition Council (NNC) is responsible for describing, analyzing and evaluating food supply and diet situations in Norway and making recommen-

dations for improvements. Since 1991, the work of nutritional surveillance has been strengthened through several major projects. The main partners in this work are The Section for Dietary Research, University of Oslo and The Norwegian Food Control Authority (SNT).

*Preparation of a comprehensive food composition database/food composition table:

NNC and SNT will publish a comprehensive food composition database/table in June 1995.

*Diet calculation system:

A professional system was developed for calculating the diet of individual subjects. This system will be used in dietary research to calculate intake of energy and nutrients, as well as food additives and contaminants.

*Dietary surveys:

During 1993, 3300 teenagers answered a quantitative food frequency questionnaire. The results showed that about 2/3 of the teenagers have a higher intake of sugar than recommended and 1/3 had a higher fat intake than 30 energy %.

A nation-wide representative sample of 5000 Norwegians aged 16–79 years of age were asked to answer a quantitative food frequency questionnaire. Intake of both nutrients and non-nutrients will be calculated.

In conclusion: NNC and SNT will maintain this monitoring work.

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Chef manager for integrating basic food composition and related databases. Li-Ching Lyu,* Maj Earle, Yun Oh Jung, David Michaels & Jean Hankin.

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The Epidemiology Program of the Cancer Research Center of Hawaii maintains food composition, dietary supplement, and recipe databases for assessment of individual dietary intakes for six major ethnic groups (Japanese, Caucasian, Chinese, Filipino, Hawaiian and Korean) in Hawaii. Food composition data for selected Pacific Islands, including Cook islands, Fiji, Tahiti, and New Caledonia, are also incorporated in our CHEF database manager system. The system is written in FoxPro Version 2.5 for DOS and provides an interactive environment among databases. The selection of food items for the database is based on dietary patterns obtained from 24-hour recalls and food records of residents in Hawaii and the Pacific Islands. In addition to published values from the U.S. Department of Agriculture, we added other components based on study hypotheses and availability of chemical analysis data. Prototype recipes are developed from basic food composition data and updated simultaneously with the changes in the basic food composition database. Systematic inputting of unknown values in food items and mathematical estimating of ingredients in commercial