

**17**  
Chapter

**Appendix**

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**DATA EDITING WORKSHOP AND EXPOSITION  
BUREAU OF LABOR STATISTICS  
MARCH 22, 1996**

*IN MEMORIAM: MARIA ELENA GONZALEZ (1932-1996)*



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**CONFERENCE SESSION I:**

**TIME: 9:00am-10:15am**

**OVERVIEWS**

*LOCATION: CONFERENCE ROOM #2*

*Chair: Fred Vogel, National Agricultural  
Statistics Service*

A Paradigm for Data Editing  
*Linda M. Ball, U.S. Bureau of the Census*

The New View on Editing  
*Leopold Granquist, Statistics Sweden*

Data Editing at the National Center for Health Statistics  
*Kenneth W. Harris, National Center for Health Statistics*

**FELLEGI-HOLT SYSTEMS**

*LOCATION: CONFERENCE ROOM #7*

*Chair: John Kovar, Statistics Canada*

DISCRETE, A Fellegi-Holt System for  
Demographic Data  
*William E. Winkler, U.S. Bureau of the Census*

Generalized Edit and Imputation System for  
Numeric Data [Separate DEMO]  
*Joel Bissonnette, Statistics Canada*

The New SPEER Edit System  
*William E. Winkler, U.S. Bureau of the Census*

**ON-SITE DATA CAPTURE**

*LOCATION: CONFERENCE ROOM #9*

*Chair: George Hamschak, National Agricultural  
Statistics Service*

Data Collection by EDI: Some Quality Aspects  
*Wouter J. Keller, Statistics Netherlands*

PERQS (Personalized Electronic Reporting  
Questionnaire System) [Separate DEMO]  
*Janet Sear and Peter Garneau, Statistics Canada*

Electronic Data Collection: the Virginia Uniform  
Reporting System [Separate DEMO]  
*Anne Rhodes and Kishau Smith, Virginia  
Commonwealth University, and Peter Goldstein,  
NI-STAR Data Systems*

**CASE STUDIES**

*LOCATION: CONFERENCE ROOM #1*

*Chair: Leda Kyloniefs, Bureau of Labor Statistics*

Towards a Unified System of Editing International  
Data [Separate DEMO]  
*Glen Ferri and Tom Ondra, U.S. Bureau of the Census*

Data Editing Software for NSF Surveys  
[Separate DEMO]  
*Richard J. Bennof, Marge Machen, and Ronald  
L. Meekx, National Science Foundation*



**CONFERENCE SESSION II:  
TIME: 10:45am-12:00pm**

**CENSUSES**

*LOCATION: CONFERENCE ROOM #2*

*Chair: Clyde Tucker, Bureau of Labor Statistics*

Automated Record Linkage and Editing: Essential Supporting Components in the Data Capture Process  
[Separate DEMO]

*Givol Israel and Olivia Blum, Central Bureau of Statistics, Israel*

Editing and Imputation Research for the 2001 Census in the United Kingdom

*David Thorogood, Office of Population Censuses and Surveys, United Kingdom*

A Priority Index for Macro-Editing the Netherlands Foreign Trade Statistics

*Frank van de Pol and Bert Diederer, Statistics Netherlands*

**GRAPHICAL/INTERACTIVE SYSTEMS**

*LOCATION: CONFERENCE ROOM #7*

*Chair: Cynthia Z. F. Clark, National Agricultural Statistics Service*

Experiences on Changing to PC-based Visual Editing in the Current Employment Statistics Program  
[Separate DEMO]

*Richard Esposito, Cynthia Engel, Laura Freeman, Bill Goodman, and Mike Murphy, U.S. Bureau of Labor Statistics*

Graphical Editing and Query System (GEAQS)  
[Separate DEMO]

*Paula Weir, U.S. Energy Information Administration*

Integrated Data Capture: A System for All Office of Compensation and Working Conditions Surveys  
[Separate DEMO]

*Mary Kelly, U.S. Bureau of Labor Statistics*

**CATI-CAPI TECHNICAL**

*LOCATION: CONFERENCE ROOM #9*

*Chair: Fred Wensing, Australian Bureau of Statistics*

Questionnaire Programming Language (QPL)  
*Kevin Dooley, U.S. General Accounting Office*

Using a Parallel CATI Instrument to Edit Call Record Information and Removal of Incorrect Interview Data

*Timothy Triplett and Beth Webb  
University of Maryland - College Park*

A Computer-Assisted Coding and Editing System for Non-Numeric Educational Transcript Data  
[Separate DEMO]

*Stanley E. Legum, Westat, Inc.*

**STATISTICAL TECHNIQUES**

*LOCATION: CONFERENCE ROOM #1*

*Chair: Alan Estes, Federal Reserve Board*

Rethinking the Editing Algorithm for the Survey of Employment Payrolls and Hours  
*Michael Scrim, Statistics Canada*

A Statistical Edit for Livestock Slaughter Data  
[Separate DEMO]

*Linda Simpson, Henry Chiang, and Cathy Tomczak,  
National Agricultural Statistics Service*

A CSFII Data User's Principal Components Analysis for Outlier Detection

*Adeline J. Wilcox, Beltsville Agricultural Research Center*

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**CONFERENCE SESSION III:**  
**TIME: 1:00pm-2:15pm**

**CASE STUDIES**

**LOCATION: CONFERENCE ROOM #2**

*Chair: Ann Hardy, Centers for Disease Control*

Third-Party Documents: The Line Between Editing and Imputation  
*Clifford Adelman, U.S. Department of Education*

Sampling Design and Estimation Properties of a Study of Perinatal Substance Exposure in California  
*Jimmy Hwang, National University (San Diego)*

The Processing and Editing System of the National Health Interview Survey: the Old and New  
*Susan S. Jack, National Center for Health Statistics*

**NEURAL NETWORKS**

**LOCATION: CONFERENCE ROOM #7**

*Chair: Ray Board, Federal Reserve Board*

Data Editing Using Neural Networks  
*L. H. Roddick, Statistics Canada*

Editing and Imputation by Means of Neural Networks  
*Svein Nordbotten, University of Bergen, Norway*

**CATI-CAPI CONCEPTUAL**

**LOCATION: CONFERENCE ROOM #9**

*Chair: Denise Myers, National Agricultural Statistics Service*

Statistics Canada's Experience in Moving to CAI from Paper and Pencil  
*R. Jamieson, Statistics Canada*

Developing an On-line Editing System for Respondents Reporting via Touchtone Data Entry  
*David O'Connell, U.S. Bureau of Labor Statistics*

CAI and Interactive Editing in One System for a Survey in a Multimode Environment [Separate DEMO]  
*Mark Pierzchala, National Agricultural Statistics Service*

**STATISTICAL TECHNIQUES**

**LOCATION: CONFERENCE ROOM #1**

*Chair: Linda Stinson, Bureau of Labor Statistics*

Time Series and Cross Section Edits  
*David Pierce and Laura Gillis, Federal Reserve Board*

Inflation Factors for Stratified Samples with Control Information  
*Peter Ochshorn, State University of New York, Albany*

Empirical Data Review: Objective Detection of Unusual Patterns of Data  
*James Kennedy, U.S. Bureau of Labor Statistics*



### CONFERENCE SESSION IV:

TIME: 2:45pm-4:00pm

#### CASE STUDIES

LOCATION: CONFERENCE ROOM #2

Chair: Charles Day, National Agricultural  
Statistics Services

Time-Series Editing of Quarterly Deposits Data  
Anusha Fernando Dharmasena, Federal Reserve Board

Experiences in Re-engineering the Approach to Editing  
and Imputing Canadian Imports Data  
Clancy Burrett and Francois Laflamme, Statistics  
Canada

Data Editing in an Automated Environment: A Practical  
Retrospective -- The CPS Experience  
Gregory D. Weyland, U.S. Bureau of the Census

#### STATISTICAL TECHNIQUES

LOCATION: CONFERENCE ROOM #7

Chair: Sylvia Kay Fisher, Bureau of Labor Statistics

Statistical Analysis of Textual Information  
Thierry Delbecque, Sid Laxson, Nathalie Millot,  
INFOWARE, Inc.

The Impact of Ratio Weighting  
Jai Choi, National Center for Health Statistics

Fitting Square Text into Round Computer Holes - An  
Approach to Categorizing Textual Responses Using  
Computer-Assisted Data Entry  
Richard Wendt, I. Hall, P. Price-Green, R. Dahara,  
W. Kaye, U.S. Centers for Disease Control

#### EDIT AUTHORIZING TECHNIQUES

LOCATION: CONFERENCE ROOM #9

Chair: Jim O'Reilly, Research Triangle Institute

Methods of Reusing Edit Specifications Across  
Collection and Capture Modes and Systems  
Shirley Dolan, Statistics Canada

CDC EDITS: Tools for Writing Portable Edits  
[Separate DEMO]  
J. Tebbel and T. Rawson, U.S. Centers for Disease  
Control

Skip Patterns and Response Bases: Graph  
Manipulation in Survey Processing  
Robert F. Teitel, Abt Associates and George  
Washington University

#### SOFTWARE DEMONSTRATIONS

##### SESSION I:

TIME: 9:00am-12:00pm

#### SOFTWARE DEMONSTRATIONS

LOCATION: CONFERENCE ROOM #4

Editing Occupations from Income Tax Returns  
Pete Sailer and Terry Nuriddin, Internal Revenue  
Service, and Gary Teper, Information Spectrum, Inc.

On-Line Edits in the Survey of Employer-Provided  
Training  
Michael Horrigan, Polly Phipps, and Sharon Stang,  
U.S. Bureau of Labor Statistics

**SOFTWARE DEMONSTRATIONS  
SESSION I (Continued):  
TIME: 9:00am-12:00pm**

**SOFTWARE DEMONSTRATIONS**

*LOCATION: CONFERENCE ROOM #5*

Generic Editor Developed with Powerbuilder and a Relational Database  
*Ronald S. Biggar, National Center for Health Statistics*

Improving the Quality of Survey Data Through an Interactive Data Analysis System  
*Robert Hood, National Agricultural Statistics Service*

A Computer-Assisted Coding and Editing System for Non-Numeric Educational Transcript Data\*  
*Stanley E. Legum, Westat, Inc.*

CDC EDITS: Tools for Writing Portable Edits\*  
*J. Tebbel and T. Rawson, U.S. Centers for Disease Control*

*\*Indicates that an oral presentation accompanies this software demonstration*

**SOFTWARE DEMONSTRATIONS  
SESSION II:  
TIME: 1:00pm-4:00pm**

**SOFTWARE DEMONSTRATIONS**

*LOCATION: CONFERENCE ROOM #4*

The 1995 June Area Frame Instrument for CAPI and Interactive Editing\*  
*Mark Pierzchala, Roberta Pense, and Arnie Wilcox, National Agricultural Statistics Service*

PERQS (Personalized Electronic Reporting Questionnaire System)\*  
*Janet Sear and Peter Garneau, Statistics Canada*

*\*Indicates that an oral presentation accompanies this software demonstration*

**SOFTWARE DEMONSTRATIONS**

*LOCATION: CONFERENCE ROOM #6*

Distributed EDDS Editing Project (DEEP)  
*Sharon Mowry and Jason Bulson, Federal Reserve Board*

Imputing Numeric and Qualitative Variables Simultaneously  
*Sylvie Rivest and Mike Bankier, Statistics Canada*

PEDRO  
*Dale Bodzer, U.S. Energy Information Administration*

Automatic Transferring from Paper to ASCII Code\*  
*Givol Israel, Central Bureau of Statistics, Israel*

*\*Indicates that an oral presentation accompanies this software demonstration*

**SOFTWARE DEMONSTRATIONS**

*LOCATION: CONFERENCE ROOM #5*

Integrated Data Capture: A System for All Office of Compensation and Working Conditions Surveys\*  
*Mary Kelly, U.S. Bureau of Labor Statistics*

Graphical Editing and Query System (GEAQS)\*  
*Paula Weir, U.S. Energy Information Administration*

Data Editing Software for NSF Surveys\*  
*Richard J. Bennof, Marge Machen, and Ronald L. Meeks, National Science Foundation*

Generalized Edit and Imputation System for Numeric Data\*  
*Joel Bissonnette, Statistics Canada*

*\*Indicates that an oral presentation accompanies this software demonstration*

**SOFTWARE DEMONSTRATIONS***LOCATION: CONFERENCE ROOM #6*

Extensions of ARIES at the BLS\*  
*Richard Esposito and Kevin Tidemann, U.S. Bureau of Labor Statistics*

A Statistical Edit for Livestock Slaughter Data\*  
*Linda Simpson, National Agricultural Statistics Service*

Towards a Unified System of Editing International Data\*  
*Glen Ferri and Tom Ondra, U.S. Bureau of the Census*

Electronic Data Collection: the Virginia Uniform Reporting System\*  
*Arne Rhodes and Kishau Smith, Virginia Commonwealth University, and Peter Goldstein, NI-STAR Data Systems*

\*Indicates that an oral presentation accompanies this software demonstration

**ACKNOWLEDGEMENTS**

*A conference of this magnitude requires many contributions from many people in addition to the members of the organizing committee listed on this page. Special thanks to the sponsoring organizations and agencies, and to Statistics Canada, the Bureau of the Census, and the Energy Information Administration for additional assistance in making this a successful conference.*

*Thanks also to the session chairs, and especially to the presenters of talks and software demos for sharing their work.*

*Finally, behind the scenes are many additional people who contributed their time and energy to ensure the success of this venture, some of whom are: John Bosley, Monica Dashen, Leda Kydoniefs, Deborah Stone and Daphne Van Buren, Bureau of Labor Statistics; Mia Johnson, Melissa Walsh and Nancy Thomas, Federal Reserve Board; Wendy Alvey, Internal Revenue Service; and Wendy Waters, National Agricultural Statistics Service.*

**DATA EDITING WORKSHOP AND EXPOSITION: ORGANIZING COMMITTEE**

Dave Pierce, Chair  
*Federal Reserve Board*

Mark Pierzchala, Co-Chair  
*National Agricultural Statistics Service*

Yahia Ahmed  
*U.S. Internal Revenue Service*

Frances Chevarley  
*National Center for Health Statistics*

Charles Day  
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*U.S. Bureau of Labor Statistics*

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*Joint Program in Survey Methodology*

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*U.S. Bureau of Labor Statistics*

Paula Weir  
*U.S. Energy Information Administration*

Bill Winkler  
*U.S. Bureau of the Census*



## List of Attendees at the Data Editing Workshop and Exposition

|  |   |   |
|--|---|---|
| Margret Adams<br>The Arbitron Company                      | Mike Bankier<br>Statistics Canada                                 | Zelia Bianchini<br>IBGE-Diretoria de Pesquisas,Brazil       |
| Clifford Adelman<br>Department of Education                | Peggy Barker<br>National Center for Health Statistics             | Ronald S. Biggar<br>National Center for Health Statistics   |
| Yahia Ahmed<br>Internal Revenue Service                    | Betty Barlow<br>Energy Information Admin.                         | Yvonne M. Bishop<br>Energy Information Admin.               |
| Jaspreet Ahuja<br>Agricultural Research Service            | Oscar Barnhardt<br>Federal Reserve Board                          | Joel Bissonnette<br>Statistics Canada                       |
| Tony Alvarez<br>Federal Reserve Board of NY                | Clancy Barrett<br>Statistics Canada                               | Dan Blanchette<br>University North Carolina,<br>Chapel Hill |
| Darrell Anderson<br>Bureau of the Census                   | Carl Barsky<br>Bureau of Labor Statistics                         | Olivia Blum<br>Central Bureau of Statistics,<br>Israel      |
| Gary Anderson<br>Federal Reserve Board                     | Lisa Bastian<br>Defense Manpower Data Ctr.                        | Ray Board<br>Federal Reserve Board                          |
| Craig Anderson<br>National Agricultural Statistics Service | Stephanie Battles<br>Energy Information Admin.                    | Janice E. Bodner<br>Agricultural Research Service           |
| Mark Apodaca<br>National Agricultural Statistics Service   | Karen Beauregard<br>Agency for Health Care Policy and<br>Research | Dale Bodzer<br>Energy Information Admin.                    |
| Maribel Aponte<br>Bureau of the Census                     | Bernard Bell<br>Bureau of Labor Statistics                        | Thomas P. Bonczar<br>Bureau of Justice Statistics           |
| Catherine Armington<br>Consultant                          | Michael E. Bellow<br>National Agricultural Statistics Service     | Lisa Bradburn<br>Bureau of Economic Analysis                |
| Mary Brightwell Arnold                                     | Millie Bendl<br>Westat, Inc.                                      | Douglas Braddock<br>Bureau of Labor Statistics              |
| Joy Aso<br>Bureau of the Census                            | Frank Benford<br>National Agricultural Statistics Service         | Bradley Braden<br>Health Care Financing Admin.              |
| Donna Atkinson<br>Birch & Davis Assoc., Inc.               | Rich Bennof<br>National Science Foundation                        | Raphail Branch<br>Bureau of Labor Statistics                |
| Dale Atkinson<br>National Agricultural Statistics Service  | Suzan Benz<br>National Agricultural Statistics Service            | Laura Branden<br>Westat, Inc.                               |
| R. Clifton Bailey<br>Health Care Financing Admin.          | Sherry Beri<br>Energy Information Admin.                          | Russ Bredbenner<br>Bureau of the Census                     |
| Linda M. Ball<br>Bureau of the Census                      | Martha Bethea<br>Federal Reserve Board                            | Gary Breslau<br>Abacus Technology                           |
| D. Catherine Baltzell<br>General Accounting Office         | Karil Bialostosky<br>National Center for Health Statistics        | Beth Bridgeman<br>Westat, Inc                               |
| Scott Banker<br>The Arbitron Company                       |   |   |



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| Debra Brody<br>National Center for Health Statistics                         | Karen Campbell<br>CSR, Inc.                                     | Timothy M. Copeland<br>Centers for Disease Control                         |
| Thomas Broene<br>Energy Information Admin.                                   | Brian S. Canham<br>U.S. Department of Labor                     | Rosalee Copeland<br>Aspen Systems Corp.                                    |
| Camilla A. Brooks<br>CBQ   | John C. Cannon<br>Bureau of the Census                          | Jim Cotter<br>National Agricultural Statistics Service                     |
| Stephen P. Broughman<br>National Center for Education Statistics             | Susan Capella<br>Statistics Canada                              | Barbara Cox<br>Bureau of Labor Statistics                                  |
| Elizabeth R. Brown<br>Colorado Dept. of Public Health<br>and the Environment | Margaret Carroll<br>National Center for Health Statistics       | R. Dahara<br>Centers for Disease Control                                   |
| Prudy Brown<br>National Research Council                                     | William Chan<br>American College of Radiology                   | Donald R. Dalzell<br>Bureau of the Census                                  |
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| Fe Caces<br>CSR, Incorporated  | Nancy Connelly<br>Cornell University                            | Anusha Dharmasena<br>Federal Reserve Board                                 |
|  | Dan Conti<br>Bureau of Labor Statistics                         |  |

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| Bert Diederer<br>Statistics Netherlands                     | Sara Fein<br>Food & Drug Administration                         | Peter Gameau<br>Statistics Canada                          |
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| Cathryn Dippo<br>Bureau of Labor Statistics                 | Gary Feuerberg<br>Defense Manpower Data Center                  | Laura Bauer Gillis<br>Federal Reserve Board                |
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| Tracy E. Farmer<br>Bureau of Labor Statistics               | David Gailer<br>Bureau of Economic Analysis                     | Sioux Groves<br>Bureau of Labor Statistics                 |



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| Kerry J. Gruber<br>National Center for Education Statistics    | Kelly Heilman<br>MD Health Resources Planning<br>Commission   | Jimmy Hwang<br>University of California, San Diego     |
| Patricia M. Guenthen<br>Agricultural Research Service          | Robert J. Hemming<br>Bureau of the Census                     | Ho-Ling Hwang<br>Oak Ridge National Laboratory         |
| Leverett Lynn Guess<br>Research Triangle Institute             | Peter Henderson<br>National Research Council                  | Linda Ingwersin<br>U.S. Department of Agriculture      |
| Louise Guey-Lee<br>Energy Information Admin.                   | Julie Heneberry<br>The Arbitron Company                       | Cathleen Irish<br>Consumer Product Safety Commission   |
| Tanya J Guthrie<br>Defense Manpower Data Center                | Tammy Heppner<br>Energy Information Admin.                    | Bill Iwig<br>National Agricultural Statistics Service  |
| Etta Susanne Haggerty<br>U.S. Department of Agriculture        | Doug Herold<br>Federal Reserve Board                          | Susan S. Jack<br>National Center for Health Statistics |
| I. Hall<br>Agency for Toxic Substances and<br>Disease Registry | Mary D. Herr<br>Delaware Div. of Public Health                | KA Jagannathan<br>Admin. for Children & Families       |
| Theresa Hallquist<br>Energy Information Admin.                 | John S. Hilton<br>Bureau of the Census                        | R. Jamieson<br>Statistics Canada                       |
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| W. Kaye<br>Agency for Toxic Substances and<br>Disease Registry | Nancy A. Krauss<br>ACOG   | Yan Liu<br>George Washington Univ.                       |
| Yonnas Keffe<br>Bureau of Labor Statistics                     | Mary Kuta<br>Highway Loss Data Institute                          | Baiming Liu<br>Cornell University                        |
| Wouter J. Keller<br>Statistics Netherland                      | John Laffman<br>Bureau of Economic Analysis                       | Barbara Livingston<br>Internal Revenue Service           |
| Mary Kelly<br>Bureau of Labor Statistics                       | Francois Laflamme<br>Statistics Canada                            | Nancy Loester<br>Bureau of Labor Statistics              |
| James Kennedy<br>Bureau of Labor Statistics                    | Lauchland Lake<br>Acting Chief Statistician,<br>St. Johns, Antigo | Tecla C. Loup<br>University of Michigan                  |
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