2003–2004 District Court Case-Weighting Study

Final Report to the Subcommittee on Judicial Statistics of the Committee on Judicial Resources of the Judicial Conference of the United States

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So we are left with the prospect of expressing our gratitude to most of the project's contributors by stating general appreciation. Offering general, rather than specific, thanks doesn't satisfy our compulsion for detail, but we understand the value of exercising restraint and so declare, to everyone who assisted with this study, you have our profound gratitude. We could not have asked for a better group of collaborators.

General acknowledgments aside, we would like to recognize the contributions of a few specific individuals.

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We owe a debt to Russell Wheeler, deputy director of the FJC, for sheltering us from distractions so we could focus on producing timely case weights. We thank Jim Eaglin, director of the FJC Research Division, for providing the division resources we needed to meet the demands of this project. Special appreciation goes to Donna Stienstra of the Research Division for the detailed review and substantive comment she provided on this manuscript. Any errors or omissions in the text remain our responsibility, of course.

The members of our project team—listed on the title page of this report—are a formidable group of researchers, computer specialists, and support staff. For almost two years we wrestled together with the myriad aspects of this study. These team members have our respect and gratitude, for we could not have completed the work without their individual and group efforts and dedication to the project.

Last, but by no means least, we thank our family members. They tolerated graciously our unusual travel and work schedules, and were generous with the kind of support you can only get from home.

Pat Lombard and Carol Krafka
Research Division, Federal Judicial Center

Executive Summary

The Federal Judicial Center (FJC), with assistance from staff of the Administrative Office of the U.S. Courts (AO), conducted a study in 2003–2004 to develop a new set of federal district court case weights using an event-based methodology. The Subcommittee on Judicial Statistics (Subcommittee) and the Committee on Judicial Resources (JRC), which had requested the study, approved the replacement of old weights with the resulting set of new weights at their respective meetings in June 2004. The old weights had been in use since they were approved in 1993.

The AO will use the new case weights to compute weighted caseload statistics for the district courts. Weighted caseloads estimate the case-processing effort required by district judges to adjudicate the volume and mix of cases filed in their courts and help to identify the level of judicial resources needed by the courts to meet their caseload burden.

What are case weights?

Cases filed in the district courts require varying amounts of judicial work to process. At the time a case is filed, the best prediction of how much work will be required hinges on the nature of the case. Observers of the courts would agree, for example, that a judge is likely to spend more time processing a newly filed patent case than a newly filed student loan case. A number of case-specific factors can cause an individual patent or student loan case to depart from this pattern, but over a large number of cases, the general relationship holds true.

Because different case types present different levels of burden, the mix of cases filed in a court is as important a factor in determining the amount of work required to process the court's caseload as is the number of cases. Case weights are a measure of the judicial work required by cases of different types. They indicate how much more or less time-consuming one type of case is compared to other cases.

Case weights have been used in the federal district courts for over thirty years. Previous case weights were based on time studies that asked judges to report contemporaneously on time they spent working on cases of different types. The case weights derived from such studies reflected the average amount of time spent on each type of case.

This study used a different method for determining case weights. Instead of computing weights from time reports, the staff modeled weights as the interaction between two components: (1) the different events that a judge must complete to process a case (e.g., hold hearings, read briefs, decide motions, and conduct trials) and (2) the amount of time required to accomplish those events. The assumption underlying the method is that the reason patent cases take more judge time than

student loan cases is because patent cases have more events and the events tend to take longer to complete.

Event-based case weighting is new to the federal courts. The Subcommittee decided to pursue this innovative approach after considering both the opportunities and challenges the method presented. Factors that weighed in favor of the decision to proceed included the following: (1) staff could complete the study in a relatively short period of time; (2) the method relied substantially on objective data that courts already routinely collect for administrative and case-management purposes; (3) the study would not require judges to keep case-processing time diaries; and (4) case weights derived from event-based methods can be updated more frequently than weights based on time studies, either in a targeted manner for particular case types, or in a comprehensive manner for the entire set. This latter feature means that the weights can be more readily updated to reflect changes in case-management procedures implemented in the courts in response to judicial or legislative initiatives.

The main challenge that staff conducting the study expected to face was how to acquire and process the data needed for computations. Much of the data came from the case-docketing databases used in individual district courts. Data issues were especially salient because federal district courts were in the process of transitioning from one automated case-docketing system to another.

The Design of the Event-Based Study

Project staff required three types of information to compute the event-based case weights: (1) structural categories, (2) event frequency, and (3) judicial time. Staff obtained the required information from standard statistical reports that the courts submit to the AO, data extractions from district court docketing databases, and consensus judgments provided by experienced district judges.

Structural Categories: Case Types and Case Events

Structural categories are the case types and case events that form the components of the case-weight computations. A Judge Advisory Group, composed of the members of the Statistics Subcommittee and the district judge members of the JRC, worked with staff to define civil and criminal case types that would form the backbone of the case-weighting system. The final case-weighting system included forty-two civil case types and twenty-one criminal case types.

Civil case types were based on the set of nature-of-suit codes that the AO uses to categorize the various causes of action under which a civil case can be filed in the federal courts; a few case types were further differentiated by federal jurisdiction. Examples of major civil case types, each of which accounted for more than 5% of the nation's fiscal 2002 civil caseload, include Personal Injury, Product Liability, Civil Rights (non-prisoner), Prisoner Civil Rights/Prison Conditions

(State), and Social Security. Criminal case types were mainly based on the list of codes the AO uses to represent the various federal offenses for which an offender can be indicted; two additional case types were established to account for the holding of supervision revocation hearings. Major criminal case types include All Other Fraud, Other Immigration, Sell or Distribute (drug offense), Firearms, and All Misdemeanor and Petty Offenses.

Case events are tasks that judges perform to process a case. The case events used in the computation of case weights for this study comprised four general case-event categories: (1) Trials and Other Evidentiary Hearings (e.g., conducting jury and non-jury trials); (2) Non-Evidentiary Hearings and Conferences (e.g., conducting pretrial conferences, motion hearings, arraignments); (3) In-Chambers Case Related Activities (e.g., preparing orders on summary judgment or other dispositive motions); and (4) Case Adjustments (which required, for example, special consideration of cases having more than five parties and cases with an interpreter present at proceedings). The events included in the case-weighting structure represent a range of case activities that require substantial time and attention from district judges.

Event Frequency

Event frequency refers to how often a specific event is likely to occur, on average, in a case of a particular type. The project team determined event frequency by analyzing docketed events from 297,029 cases (245,666 civil cases and 51,363 criminal defendants) that terminated in calendar 2002. Eighty-seven district courts contributed data from their docketing databases to the event-frequency measures.

Judicial Time

Estimates of the average time district judges spend processing each of the defined case events are critical to event-based case weighting. The information for estimating time expenditure was drawn from two sources: (1) monthly JS-10 reports of trial proceedings—these reports provided objective measures of judicial time spent in trial, and (2) the consensus assessments of experienced district judges, providing estimates of time spent in non-trial proceedings and chambers activities.

Project staff used JS-10 reports on 36,010 civil trials and 37,576 criminal trials to compute the trial time estimates. For non-trial time estimates, staff designed a two-stage process to gather and evaluate judgment-based time estimates. More than 100 district judges representing 90 courts convened in meetings held in each circuit to determine regional estimates of time required to handle events in different cases. Twenty-two district judges who participated in the circuit meetings then attended a national meeting during which they analyzed the circuit estimates and agreed on final time-expenditure estimates to represent the national average.

These final, consensus-based estimates were used in the new case-weight calculations.

Computing the Weights

The raw case weight for any particular case type was calculated by (1) multiplying event frequency and judicial time for each type of case event and (2) summing the products across case-event types. The raw weight estimated the total time required, on average, to process a newly filed case of the given type.

Staff then transformed the raw weights into relative weights. Relative weights preserve the relationship among case types, but are easier to use than raw weights when comparing case-type burden. These weights do not represent actual time; they instead measure the relative work required to process cases of different types. Thus, a case type with a weight of 2.00 requires twice as much district judge work as a case type with a weight of 1.00. A case type with a weight of 0.50 requires half as much work as a case type with a weight of 1.00.

The relative weight for any particular case type was its raw weight divided by the raw weight value of the median case type. When all the case types were ranked by raw weight, the median case type was All Other Felonies. All Other Felonies, therefore, received the benchmark weight of 1.00. Other case types were weighted relative to All Other Felonies.

The project staff submitted preliminary weights to the Judge Advisory Group for their review in mid-May 2004. An additional adjustment was applied to the weights following the review to incorporate the effect of trying co-defendants together in criminal trials, and final weights were presented to the Subcommittee at its June 15, 2004, meeting. Following a discussion of the weights and their impact on the weighted caseloads of the district courts, the Subcommittee approved the new weights for immediate use. At the recommendation of the Subcommittee, the JRC approved the weights on June 17, 2004.

Table 1 lists the approved weights, by case type, derived from this study. The case type with the highest computed case weight was Death Penalty Habeas Corpus (12.89), followed by Environmental Matters (4.79), Civil RICO (4.78), Patent (4.72), and Continuing Criminal Enterprise (4.36). The lowest weighted case types were Overpayment and Recovery (0.10), Asbestos (0.12), Supervised Release/Probation Revocation Hearing (Non-Evidentiary) (0.14), All Misdemeanor and Petty Offenses (0.18), and Supervised Release/Probation Revocation Hearing (Evidentiary) (0.22).

Table 1: New 2004 District Court Case Weights

Case Weights for Civil Case Types		
General Category	**Case Type**	**2004 Study Weight**
Admiralty	Admiralty	0.88
Banking and Finance	Banking and Finance	1.17
Bankruptcy	Bankruptcy Appeals	0.57
	Bankruptcy Withdrawals	0.74
Civil Rights	Civil Rights: Employment	1.67
	Civil Rights: Other	1.92
	Civil Rights: Voting	3.86
Commercial Litigation	Antitrust	3.45
	Civil RICO	4.78
	Interstate Commerce	0.84
	Other Fraud	1.70
	SEC, CFTC, and Similar Enforcement Actions (US Plaintiff)	2.08
	SEC, Commodities, and Stockholder's Suits (Non-US Plaintiff)	1.93
Contracts	Insurance Contracts	1.41
	Other Contract Actions	1.22
	Overpayment and Recovery	0.10
Forfeiture and Penalty	Forfeiture and Penalty	0.42
Intellectual Property	Copyright and Trademark	2.12
	Patent	4.72
Labor	All Other Labor	1.02
	ERISA	0.84
Other Actions	All Other Actions (Including Local Jurisdiction)	0.99
	Environmental Matters	4.79
	Federal Tax Suits	1.29
	Freedom of Information Act	3.06
Prisoner Litigation	§2254 Habeas Corpus Petitions	0.54
	§2255 Petitions to Vacate Sentence	0.32
	Death Penalty Habeas Corpus	12.89
	Deportation / Immigration	0.44
	Mandamus	0.49
	Prisoner Civil Rights / Prison Conditions (Federal)	0.75
	Prisoner Civil Rights / Prison Conditions (State)	0.67
Real and Personal Property	Foreclosure	0.32
	Land Condemnation	0.76
	Other Property Actions (Real or Personal)	1.17
Social Security	Social Security	0.63
Torts	Asbestos	0.12
	Assault, Libel, and Slander	1.47
	Federal Employer's Liability	0.76
	Medical Malpractice	1.40
	Personal Injury (Excluding Admiralty)	0.90
	Product Liability (Excluding Admiralty)	0.61

Table 1: New 2004 District Court Case Weights (continued)

Case Weights for Criminal Case Types		
General Category	**Case Type**	**2004 Study Weight**
Drug Offenses	Continuing Criminal Enterprise	4.36
	Import / Export	0.61
	Manufacture	1.12
	Possession	0.86
	Sell or Distribute	1.07
Espionage and Terrorism	Espionage and Terrorism	1.08*
Extortion, Threats, and RICO	All Extortion, Threats, and RICO	1.89
Financial Crimes	All Fraud	0.97
	Embezzlement, Forgery and Counterfeiting	0.75
Firearms	Firearms	1.00
Homicide, Assault, Kidnapping	Aggravated or Felonious Assault, Kidnapping	1.34
	Murder, Manslaughter, Homicide	1.99
Immigration Offenses	Alien Smuggling	0.57
	Other Immigration	0.47
Misdemeanor and Petty Offenses	All Misdemeanor and Petty Offenses	0.18
Other Felony Offenses	All Other Felonies	1.00
Robbery, Burglary, Larceny and Theft	Larceny and Theft	0.87
	Robbery and Burglary	0.71
Sexual Offenses	Sexual Offenses and Pornography	1.10
Supervised Release and Probation Revocation Hearings	Supervised Release and Probation – Evidentiary Revocation Hearing	0.22
	Supervised Release and Probation – Non-Evidentiary Revocation Hearing	0.14

* This weight is believed to underestimate the average burden associated with Espionage and Terrorism cases. The weight is based on a small sample (12 cases) that probably does not represent the range of case-processing activity that would be found if a larger sample size that included cases representative of pending and future filings were analyzed. Despite the weight's limitation, the Subcommittee will use the weight as computed until such time as more representative terminations data become available and the weight can be recomputed.

Organization of the Report

The report is divided into six parts:

I. Overview of the Event-Based Design—Describes the background of the study, the basic elements of the design, and subsequent design modifications.

II. Structure of the Study—Describes work performed with the assistance of advisory groups to define the preliminary structure of the case-weight model, the calculation of trial time estimates from objective data, and the development of default values for case events.

III. Circuit and National Meetings—Describes the preparation for and execution of the twelve circuit meetings, modifications to the case-weighting structure that were proposed in circuit meetings, decisions on the proposed modifications, and development of final time estimates at the National Consensus Meeting.

IV. Data Extraction and Data Processing—Describes the procedures used to extract docketed information from the courts' case-docketing databases, process the extracted data, and produce event frequency values.

V. Computation of the Case Weights—Describes the development of preliminary weights, the incorporation of a multidefendant case adjustment to arrive at the final weights, and how case weights are computed.

VI. Action on Final Case Weights—Describes materials submitted to support the final review of the case weights (materials that included weighted caseload calculations for the district courts), Subcommittee and JRC decisions to approve the case weights, and case-weight information prepared for dissemination to the courts.

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Part I. Overview of the Event-Based Design

This section of the report provides background on the origins of the event-based case-weighting study, including discussion of the proposed and final design.

Background

In December 1993, the Subcommittee on Judicial Statistics replaced an outdated set of case weights with new weights derived from a time study conducted by the Federal Judicial Center. The Administrative Office used the 1993 weights to calculate weighted caseloads in the U.S. district courts over the next ten years.

With the passage of time, federal courts experienced changes in the volume and nature of cases entering the federal system. The courts responded to the changing caseload, as well as to legislative initiatives such as the Civil Justice Reform Act, by adapting their case-management practices. As a result of such changes, Subcommittee members began to anticipate the need for updated case weights, and in June 1999 they asked the FJC to investigate options for a new case-weighting study.

Over the next several years, FJC staff provided the Subcommittee with information about various approaches to case weighting and the options for conducting a study in the district courts. The Subcommittee reviewed the options and expressed particular interest in an approach that had been used to develop case weights in some state courts but that had not previously been applied to the federal courts. This approach—which used an event-based method—relied heavily on objective case information collected by courts on a routine basis.

An event-based method appealed to the Subcommittee for several reasons. The method makes use of existing data and provides the means for a targeted updating of specific weights in the future, without the need for a full-scale study. The method also holds the promise of increasing precision. Docketing features soon to be in everyday use will provide for an increasing proportion of objective time data. Moreover, as more courts convert from ICMS docketing to CM/ECF docketing systems, the data on which event-based weights rely will become standardized.[1]

A central question that FJC staff posed about the event-based approach was whether court data were available in sufficient detail to support case-weight calculations. This question remained unsettled until 2002, when FJC staff concluded that data contained in standard statistical reporting systems, along with data contained in courts' ICMS and CM/ECF docketing databases, were sufficient to proceed. The structure of CM/ECF systems provided detailed, uniform docketing

1. ICMS is the acronym for a general database system known as the Integrated Case Management System that has been used for docketing in all but a handful of district courts for many years; CM/ECF stands for Case Management/Electronic Case Filing, which is a database-management system currently being phased into the courts to replace ICMS.

data and was especially suited for event-based case weighting. Although fewer than half of the courts had replaced ICMS with CM/ECF by the end of 2002, the existence of uniform data from a substantial number of courts favored using an event-based case-weighting methodology.

Proposed Design and Design Modifications

In December 2002, the Subcommittee considered several proposals for a new case-weighting study in the federal district courts. Written materials, prepared by staff of the FJC and the AO, presented different options for conducting the study. The Subcommittee wanted a study that could produce case weights in a relatively short period of time without imposing a substantial record-keeping burden on district judges.

The FJC design proposed the use of routinely collected data to identify case types, compute event frequencies, and provide objective time estimates for trials and proceedings. Project staff recommended conducting a national survey of district judges to obtain time estimates for non-proceeding chambers activities. The survey results would then be presented to a gathering of district judges representing a cross-section of district courts, and these judges would discuss the results and use a structured iterative-feedback technique (a variation of the Delphi Method) to arrive at a consensus estimate of the judge time required to process each case type and event combination.[2] Appendix A provides an overview of the original FJC design.

The AO document presented general information about design options rather than a single study proposal, including two different approaches to determining case weights: (1) judges would decide average estimates of the total time required to process different kinds of cases in their entirety, with either the FJC or AO transforming the estimates into relative case weights; or (2) judges would decide on such estimates and determine the appropriate case-weight values directly, without assistance from the FJC or AO.

The AO document additionally described options for collecting the necessary time estimates. Suggestions included focus groups, focus groups with separate data validation, and judge interviews. The focus group option, which was explored in detail, proposed that judges gather together in a series of group meetings, held in each circuit, to obtain initial regional estimates of case burden. This would be followed by a national gathering of district judges to resolve differences among circuit estimates.

After considering both the FJC and AO submissions, the Subcommittee asked the FJC to conduct a case-weighting study that merged elements of the two agen-

2. The Delphi Method is an iterative-feedback group estimation procedure for obtaining a consensus estimate. Some state courts have used the method to develop case weights. Originally, the method was implemented through written exchanges and voting, but more recently it has been employed with groups that are meeting face-to-face.

cies' proposals. The study retained the general components of the FJC's event-based design but collected regional time estimates through a series of circuit meetings rather than a survey. A national review group would then evaluate the regional estimates using structured consensus-building techniques modeled after the Delphi Method to arrive at final national time estimates.

The Subcommittee asked the FJC to provide new case weights by June 2004 and asked the AO to provide the FJC with assistance.

Event-Based Case-Weighting Overview

The computation of the event-based case weights for this study required three types of information:

- *case characteristics*—used to organize individual cases into case types and to identify civil and criminal cases with special characteristics that place additional demands on judges' processing time;
- *event frequency*—used to profile the frequency of activities requiring judicial attention in each of the defined case types; and
- *judicial time*—estimates of the average time required for judges to handle the events leading to disposition of various case types.

We obtained basic information on case characteristics from standard statistical reporting forms that courts submit to the AO. Such information included nature of suit, basis of federal jurisdiction, and indicted offense. Other information was obtained from data residing in courts' case-management databases. Such information identified, for example, civil cases having multiple parties and criminal cases involving prosecution with the death penalty, multiple defendants, or a courtroom interpreter.

We derived the information required to calculate event frequency from records of docketed activity contained in the courts' administrative databases. Events included such proceedings and activities as trials, conferences, hearings, the issuance of orders, and the issuance of opinions.

Two sources of information provided estimates of the judicial time needed to handle case events and activities. One source was JS-10 reports (JS-10 Monthly Report of Trials and Other Court Activity). JS-10 reports are monthly reports, submitted by courts to the AO, of time spent in trial and other non-trial proceedings. These JS-10 reports provided objective measures of judicial time spent in trials and evidentiary hearings. (See Appendix F for a copy of the JS-10 form.)

The second source of judicial time measures came from judgment-based estimates provided by district judges. Experienced judges met in every circuit to estimate the average time that judges in their circuit spend on various case events and activities, specifically non-evidentiary proceedings (such as motion hearings and conferences) and case-related activities conducted in chambers (such as reading briefs or writing opinions). Representatives from the twelve circuit meetings

then convened in a national forum to evaluate the circuit results. Using a variation of the Delphi Method, the national group established final time estimates that we incorporated into the case-weight computations for non-trial case events.

Table 2 presents an overview of the components of the event-based case-weighting study conducted by the FJC.

Introducing the Project to the Courts

We notified judges and court staff about the upcoming study once the Subcommittee decided to launch the project. Notification entailed presentations to the Conference of District Judge Representatives to the Judicial Conference of the United States (March 2003), the Administrative Office's District Clerks' Advisory Group (April 2003), the FJC's annual conference for chief judges of the U.S. district courts (with the then-chair of the Subcommittee, April 2003), and the circuit executives' meeting at the time of the Judicial Conference meeting (September 2003). Liaison staff from the FJC to various Judicial Conference committees provided members of those committees with regular project updates during the course of their reporting on FJC activities. In addition, the June 2003 edition of the *Third Branch,* the federal courts' newsletter, described the study and how it would be conducted. Appendix B includes an example of slides we presented to several of the groups, as well as a copy of the *Third Branch* article.

Table 2: Development of District Court Case Weights Using an Event-Based Approach

	Final Calculation Components	
Event Categories	**Source of Time Information/How Analyzed**	**Source of Frequency Information and Docket Markers/ How Analyzed**
(A) **Trials and Other Evidentiary Hearings**	• Trial hours reported on the JS-10 (page 1). • Computed average times directly from reported data. • Data reported by active district judges for period 1996–2002. • Data matched to case information to identify case type. • Criminal trial times based on single-defendant trials only. • Data for evidentiary supervised release and probation revocation hearings only available for 2001–2002.	• Court administrative databases (ICMS and CM/ECF) and JS-10 data. • Identified docket events that documented the occurrence of an evidentiary hearing or trial. • JS-10 trial (page 1) records matched to analysis case. • Detected and eliminated duplicate events from the two data sources. • Examples: Docket entry indicating a jury trial was held, JS-10 record identifying a preliminary evidentiary hearing was conducted.
(B) **Non-Evidentiary Hearings and Conferences**	• Computed average times for non-evidentiary supervised release and probation revocation hearings directly from the times and counts reported on the JS-10 (page 2). Data available for 2001–2002 only. • Time spent by judges in other non-evidentiary proceedings is not recorded with sufficient specificity on the JS-10 (page 2) to use in the case-weighting calculations. Estimates of time spent in these activities were obtained using this two-step approach: (1) Conducted a series of meetings, one in each circuit, of active district judges representing the district courts in the circuit. Asked the judges to discuss and agree on an estimate of the average time required to accomplish the described tasks for each case type. Prior to the meeting participants were asked to record their individual estimates of the time required on a set of worksheets. (2) Convened a group of judges, two from each circuit who participated in the circuit meetings, to review the estimates obtained from the circuit meetings. Using structured iterative-feedback (i.e., Delphi) techniques they arrived at a consensus estimate of time required, on average nationally, for each task. • Time estimates obtained at the national consensus meeting were used in the case-weight computations.	• Court administrative databases (ICMS and CM/ECF). • Identified docket events that documented the occurrence of a non-evidentiary proceeding. • Examples: Minutes of a motion hearing filed, reference to status conference held, indication that a plea hearing was held.

Table 2: Development of District Court Case Weights Using an Event-Based Approach (continued)

	Final Calculation Components	
Event Categories	**Source of Time Information/How Analyzed**	**Source of Frequency Information and Docket Markers/ How Analyzed**
(C) **In-Chambers Case-Related Activities** **(e.g., activities related to issuing an order or writing an opinion, preparation for trials or hearings)**	• Indications of non-proceeding time spent by judges are not captured in any standard reporting. Therefore, estimates of time spent in these targeted activities were obtained using the same two-step approach described above: (1) Conducted a series of circuit meetings to obtain regional estimates. (2) Convened a national consensus meeting to obtain an estimate of the national average time required. • Time estimates obtained at the national consensus meeting were used in the case-weight computations.	• Court administrative databases (ICMS and CM/ECF). • Identified docket events that mark the issuance of an order, judgment, or opinion on certain types of dispositive and substantive motions. • The order is the docket marker, but the time estimate included a full range of activity that resulted in that order, including reading briefs, doing research, conferring with colleagues and staff, deciding, and writing the order or opinion. It did not include holding a hearing on the issue, which was credited separately (in one of the above categories) or direct preparation for the hearing which was included separately in this category. • Examples: Issuing an order on a motion for summary judgment, a motion to dismiss, a discovery motion, or a final judgment in a case. Counts of trials and non-trial proceedings obtained in the categories above were used as the frequency values for the preparation events.
(D) **Case Adjustments** **(e.g., cases with multiple parties, death penalty cases)**	• Judges recognized that there is often a time savings associated with trying co-defendants together. The estimated savings was computed from JS-10 data (page 1) based on multidefendant trials conducted 1996–2002. • Although judges agreed that the existence of certain case characteristics added to the time required to process a case that was not reflected in the time or incidence of defined events, there was no objective source of information on the amount of time added. Estimates of the relevant adjustment based on these case characteristics were obtained using the same two-step approach described above: (1) Conducted a series of circuit meetings to obtain regional estimates. (2) Convened a national consensus meeting to obtain an estimate of the national average value. • At both the circuit meetings and the national meeting, judges found it more appropriate to define the value of the adjustment in terms of a percentage of the time otherwise spent on the case rather than assigning a specific time value. • Estimates obtained at the national consensus meeting were used in the case-weight computations.	• Court administrative databases (ICMS and CM/ECF). • Identified docket events that mark the filing of certain motions or requests, or the existence of defined case characteristics. • Examples: Count of the number of parties appearing in the case, filing of a motion to certify a class, filing of a notice of intent to seek the death penalty, filing a CJA Form 30 request, appointment of an interpreter, indication on the JS-10 trial record that co-defendants were tried together.

Part II. Structure of the Study

This section of the report describes work done with advisory groups to define the structural components of the case-weight computations, the calculation of trial time estimates from objective data, and the development of default values for case events.

Technical Advisory Group

We assembled a Technical Advisory Group to help us understand the technical details of docketing using the ICMS and CM/ECF systems. The Technical Advisory Group consisted of operations and systems staff from several courts and technical staff from the programming and automation support divisions of the AO. Members were chosen to reflect a cross-section of experience with the docketing systems used in the courts.

The advisory group met with us for two days beginning March 20, 2003.[3] The goals of the meeting were to (1) obtain a better understanding of the courts' docketing systems; (2) identify existing court resources, tools, and utilities that might be adapted for use in the project; (3) receive immediate Technical Advisory Group assistance in developing event categorizations and extraction routines; and (4) secure a commitment for continuing assistance to the project from Technical Advisory Group members, especially a commitment to review materials and pilot test programs. (See the meeting agenda in Appendix C.)

After presenting the design and purpose of the new study, we described for the advisory group the type of information that would be required from court databases. The technical advisors then discussed whether the information was consistently captured in databases and what data elements would need to be extracted. The group addressed structural differences between the ICMS and CM/ECF docketing systems as well as differences between ICMS implementations (differences were based on the models distributed by the Arizona and Texas Training Centers). The group also reviewed starter dictionaries, which identify the codes and descriptions used to docket various events when databases first begin operation, for indications of the information available in each of the systems. (See Appendix D for examples of these dictionaries.)

We came away from the Technical Advisory Group meeting realizing that we would face a number of docketing data issues. We drew the following conclusions from the group discussions:

3. Four FJC and two AO project staff members convened with four Technical Advisory Group members at the Thurgood Marshall Federal Judiciary Building in Washington, D.C.; two additional members attended via videoconference and one attended via telephone conference. Two individuals invited to participate as members of the advisory group were unable to attend as a result of travel and security problems.

- Many courts, especially those using ICMS, have customized their docketing systems. Data from these courts would require special processing before we could use it.
- Docketing practices in the courts (including such basic practices as whether hearings were docketed or how events were docketed in consolidated cases) varied considerably. The technical advisors recommended that we conduct a survey of practices to identify critical variations. We expected such information to help us determine what events could be consistently identified and counted.
- No standard conversion maps were available to translate between the codes from the ICMS starter dictionary (i.e., event and relief codes) and the CM/ECF starter dictionary (i.e., type and subtype codes). Each district court that had already converted from ICMS to CM/ECF docketing had instead created its own individualized maps as part of its conversion process. The AO agreed to assist us in obtaining these maps.
- Several programs and utilities for extracting data from the courts' case-management databases were available for adaptation.
- We could not expect systems staff in the courts to convert their event codes to a set of standard project codes. Courts would need extraction routines from us that pulled data from their systems "as is"; we would have to handle the conversions. The Technical Advisory Group advised us that programs we developed to extract data should have good documentation, be thoroughly tested in various environments, and permit courts flexibility in how and when they ran the extractions.

The meeting adjourned with members of the advisory group agreeing to provide examples of existing database query programs and to continue to assist the project. They provided subsequent assistance by reviewing materials and pilot testing extraction programs and instructions.

Judge Advisory Group

We asked the Subcommittee in December 2002 to designate members to serve as a Judge Advisory Group to the project and to ask the district judge members of the full Judicial Resources Committee to participate as well. Eight members of the designated Advisory Group, plus a district judge member of the FJC Board, met with us for two half-days beginning April 30, 2003, to help decide four principal issues: (1) which case types should receive a distinct case weight; (2) what events should be included in the case-weight computations; (3) what, if any, special case characteristics should be reflected in the case-weight computations; and (4) whether JS-10 data and information from the 1993 Time Study should be used to provide default values to help anchor judges' estimates for non-trial proceedings and in-chambers activities.

The meeting agenda and materials sent to the Judge Advisory Group before the meeting are included in Appendix E.

Establishing Case Types

The Judge Advisory Group reviewed civil nature-of-suit codes and criminal offense codes to develop civil and criminal case type categories.

Establishing Events

The Judge Advisory Group worked from the JS-10 form and the dictionary of CM/ECF events to help establish the case-weighting events. The group started from the premise that trial and proceeding events identified on the JS-10 (e.g., jury and non-jury trials, evidentiary hearings involving TROs and preliminary injunctions, conferences, pleas and arraignments, sentencing hearings) would, with one exception, be included in the case-weight calculations. The exception was grand jury proceedings, which, because they normally occur in a prefiling stage at a time when the specific offense is not yet completely determined, have traditionally been omitted from case-weight analyses. (A copy of the JS-10 form is provided at Appendix F.)

After reviewing the JS-10 form, the judges spent considerable time determining whether significant expenditures of judge time were *not* accounted for by the report. They determined that substantial judicial time is expended in chambers on substantive motions. We consequently asked them to review the CM/ECF starter dictionary to identify orders that would be issued in response to such motions. Orders, rather than motion filings, were defined as the triggering event for inclusion in the case-weighting structure because orders are likely to be docketed in a consistent manner across the courts and they reliably signal an outlay of judge time. (A sample of the list of orders in the CM/ECF starter dictionary is provided at Appendix G.)

Special Case Characteristics (Case Adjustments)

The Judge Advisory Group discussed several special case characteristics (e.g., multiple parties) that members believed would improve precision if they were incorporated into the case-weight calculations. We told the advisory group that individual case characteristics could be incorporated into case-weight calculations as "case adjustments." Case adjustments are similar, but not identical, to case events. Frequency and time estimates can be obtained for case characteristics, but they are not things that judges "do" to process cases.

Rather than rely solely on their own perceptions about what case adjustments might be important to include in the weights, the Judge Advisory Group decided that we should seek additional feedback on case adjustments from circuit partici-

pants. We were to ask, in the circuit-based meetings, whether to include these or other adjustments in the final case-weights structure.

Event Default Values

We discussed with the Judge Advisory Group the concept of providing empirically based information to judges attending circuit meetings to help anchor their judgment-based time estimates. To advance this discussion, we provided results from analyses of JS-10 data that calculated average times for selected non-trial events. We reported that data from the 1993 Time Study might provide additional non-trial event anchors.

The data were limited, since neither source provided data that corresponded precisely to events defined for the study. Moreover, the data from the 1993 Time Study were collected as segments of time rather than as total time expenditure, and they were quite dated. Still, the results of the analyses presented to the advisory group suggested the value of giving judges empirical information for their consideration when estimating time expenditure, and the advisory group therefore approved the concept of relying on these data. The empirical measures—to be presented to judges as default values for case events—were expected to provide context for the judgment process.[4]

Judge Review of Final Categories

The Judge Advisory Group appointed three of its members to work with us to follow up on decisions made at the meeting and to review the final categories of case types and events. We prepared materials showing how the recommendations made by the advisory group would be implemented, and we met with this follow-up working group by conference call to discuss the materials and other issues.

One issue that was still outstanding after the advisory group met was how to handle revocation hearings. The advisory group asked us to investigate and advise the working group on the options. We conducted additional analyses and reported that revocation hearings could be handled as (1) separate case types or (2) events in the underlying criminal case that led to the term of supervision. If handled as separate case types, revocation hearings would be counted in the weighted caseload of a court during the year in which the hearing was held. If handled as events in criminal cases, revocation hearings would be represented by a fractional increase in the weight of the underlying criminal case leading to the term of supervision.

To finalize the case-weighting structure that staff would present to judges at the circuit-based meetings, the working group (1) made minor adjustments to the

4. Default values are discussed in greater detail in later sections of the report titled "Time Data from the JS-10 Form," "Default Time Values for Non-Evidentiary Hearings and Conferences Events," and "Default Time Values for In-Chambers Case-Related Activities."

preliminary case-type groupings; (2) determined the set of case-adjustment factors to be included on the circuit worksheets; (3) provided clarification of the specific orders to be included in the event categories; (4) reviewed the proposed set of default estimates based on the analyses of JS-10 and 1993 Time Study data; and (5) decided on the best method for incorporating supervision revocation hearings. The decision on revocation hearings was to make evidentiary and non-evidentiary revocation hearings two separate case types. The full advisory group had an opportunity to review the final structure and approved the materials used in circuit-based meetings.

Time Data from the JS-10 Form

An important source of information for this study was objective data on the frequency and length of proceedings in federal district courts. Clerks of court report these data monthly to the AO for each district judge on the standard statistical form "Monthly Report of Trials and Other Court Activity" (JS-10). (A copy of the JS-10 form is provided at Appendix F.) Information on trial proceedings—defined generally as contested proceedings before a court or jury at which evidence is introduced—is recorded on the front side of the JS-10 (page 1). The back side (page 2) reports less detailed information about non-trial proceedings. These non-trial proceedings include arraignments/pleas, sentencing hearings, motion hearings, pretrial conferences, grand jury proceedings, and supervision revocation hearings.

Most of the non-trial information on the JS-10 is presented in aggregate form, which does not permit a direct accounting of the time spent on different types of proceedings or proceedings in different types of cases. Only the total time that a judge spends each day in non-trial proceedings is reported, along with a count of the non-trial proceedings by category. The JS-10 was recently modified, however, to require more specific reporting on revocation hearings, making more detailed analysis of revocation hearings possible.[5]

As described in more detail below, we used JS-10 information to calculate (1) trial time estimates, (2) revocation hearing time estimates, and (3) default time values for non-trial events. We presented the latter to judges attending circuit meetings to anchor their judgment-based estimates.

Computation of Objective Trial Time Estimates

We calculated time estimates for trials and evidentiary hearings using a two-step process that linked records in two databases. In the first step, we created a trials data set[6] from JS-10 reports submitted for active district judges during calendar

5. The JS-10 form now provides information on the total time a judge spends each day in supervised release hearings as well as probation hearings, and the number of such hearings.

6. In this discussion, the term *trials* refers to final disposition trials, preliminary evidentiary hearings, and evidentiary sentencing hearings. Objective time reports on evidentiary hearings held on the modification

years 1996 through 2002.[7] This database included trials conducted by sitting judges, active during the entire year, for whom a JS-10 report was submitted at least eleven months of the year. We excluded trials reported for senior judges, judges who were confirmed partway through the year, judges who ended their service as a district judge partway through the year (e.g., took senior status, were elevated), judges for whom there was no trial or non-trial proceeding time reported for more than one month (e.g., because of the judge's extended illness), and non-district judges (e.g., circuit judges, magistrate judges).

In the second step, we used identifiers on the trial records to match the trial information to cases contained in a separate data set, thus identifying the type of case in which the trial was held. This procedure produced a match rate of approximately 85%, which decreased to 83% after additional consistency checks were applied to reduce the probability of incorrect matches. The end result was a data set containing reported trial times on 36,010 civil trials and 37,576 criminal trials (single defendant trials only). The trial time estimates were computed on these data.[8]

Computation of Objective Revocation Hearing Time Estimates

In calendar 2001, clerks began reporting on the JS-10 form the time district judges spent in evidentiary and non-evidentiary hearings regarding the revocation or modification of a term of federal probation or supervised release. We used reported times from 1,747 evidentiary hearings and 27,129 non-evidentiary hearings conducted in calendar 2001 and 2002 to estimate the average time required by judges to conduct revocation hearings.

Computation of Default Time Values Used as Anchors for Estimates of Non-Evidentiary Hearing and Conference Events

We analyzed data from the JS-10 to generate default values for non-evidentiary hearing and conference events. We then presented the default values to judges in circuit-based meetings, with the intention of anchoring their estimates to counter tendencies toward overestimating time.

Our analysis relied on non-trial information from 22,793 monthly JS-10 reports submitted for active district judges during the three-year period from Octo-

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or revocation of probation or a term of supervised release are also reported on the JS-10 but were treated separately. See the discussion in "Computation of Objective Revocation Hearing Time Estimates," page 20.

7. We conducted preliminary analyses using trials concluded during the period October 1998 through September 2001. To obtain more data points, we subsequently expanded the data set to cover the full seven-year time period from 1996 through 2002. Expansion was necessary to permit calculation of objective trial time estimates for several case types with infrequent trials.

8. Data from an additional 11,460 criminal trials in which two or more defendants were tried together were used to calculate multidefendant adjustments that were incorporated into the final case weights. See the discussion in "Development and Application of the Multidefendant Adjustment," *infra* page 52.

ber 1998 to September 2001 (i.e., fiscal 1999–2001). As with the trial analysis, we used only data reported for district judges for whom at least eleven reports were submitted and who were active for the entire year. (See Appendix H for a more complete discussion of this analysis.)

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Part III. Circuit and National Meetings

This section describes how we obtained time estimates from judges in different circuits and then used the regional estimates to develop final time estimates at a National Consensus Meeting of judges. It also describes how recommendations to modify the initial case-weighting structure emerged from circuit meetings and how the recommendations were handled.

Circuit-Based Meetings

District judges met in circuit-based meetings to deliberate on, and reach consensus about, average time expenditures for case events and activities within the circuit. The estimates covered events such as conferences, hearings, and various in-chambers activities for which no objective data were available. Project staff facilitated the meetings and used worksheet materials to assist judges with the estimation task. The process for developing estimates promoted discussion of the components of the case-weighting calculations, which in turn prompted many circuit groups to recommend modifications to case types, case events, and case adjustments.

Project Liaison Judges

The Subcommittee identified a liaison for each circuit from among the members of the JRC to help us schedule and recruit for the circuit meetings. Liaison judges additionally opened the circuit meetings and helped to facilitate them. Ten of the twelve liaisons were district judges; the other two were a court of appeals judge and a magistrate judge.

Participants

One hundred and two district judges,[9] representing ninety of the ninety-one Article III district courts, participated in the circuit-based meetings.[10] Seven of the judges served both as a designated representative of their home district and as a project liaison. Three other liaisons took part in the meeting discussions as at-large district court members of their circuit (rather than as designees of a particular court). They are excluded from the total participant count.

9. With one known exception, all participants were active district judges. The exception was a judge who was active at the time he was designated, but took senior status shortly before the circuit-based meeting was held.

10. There are ninety-four federal district courts, but the Districts of the Virgin Islands, Guam, and the Northern Mariana Islands are not Article III courts.

Recruiting Procedure

By letter dated July 2003, the chair of the Statistics Subcommittee notified circuit chief judges about the launch of the case-weights project and requested the appointment of an active district judge from every Article III district court to participate in the circuit meeting. Chief judges in circuits with fewer than eight district courts nominated additional judges to bring the minimum number of designees for those circuits to eight. Recruiting within the D.C. Circuit was modified to reflect the size of the court, with six of the circuit's district judges attending the circuit-based meeting. A sample letter requesting assistance is included at Appendix I.

Meeting Group Size

Group sizes for the meetings ranged from six judges in the D.C. Circuit to thirteen in the Ninth Circuit. Two circuit meetings had seven representatives, rather than the eight who were expected, owing to last-minute scheduling conflicts. In two circuit meetings, a single judge served as the designated representative of two district courts. The median group size—as well as the most frequent group size—was eight judges.

Meeting Materials

Approximately three weeks before a scheduled meeting, we mailed materials designed to prepare participants for their upcoming meeting and to begin the data-collection process. The mailing consisted of a cover letter with enclosures from the chair of the Subcommittee and a separate information packet.

The cover letter provided basic information on the individual circuit meeting (e.g., its purpose, how participants were selected, whom to contact with questions) and, additionally, it informed participants of the need to provide pre-meeting estimates of event times. Letter recipients were directed to complete worksheets included in the accompanying information packet and to send them to the FJC in advance of the meeting.[11]

The information packet contained the following documents, which were numbered for reference purposes:

(1) Meeting Agenda—a preliminary schedule with an attached list of judges who were expected to attend;

(2) Information for Judges Attending the Circuit-Based Meetings of the 2003–2004 District Court Case-Weighting Study—a briefing paper providing basic information on the case-weighting study and an overview of how judges should approach their pre-meeting estimation task;

11. The cover letter used for the earliest scheduled meetings asked judges to bring completed worksheets to the meeting. Later participants were asked to send completed worksheets to the FJC in advance of the meeting.

(3) Instructions for Completing the Civil Case Worksheet—detailed instructions on how to complete the Civil Case Worksheet that was enclosed for the purpose of collecting pre-meeting event estimates;

(4) Civil Case Worksheet—a data-collection instrument reflecting the structure of the civil case-weighting system as it then existed; used to collect time estimates from judges before the circuit-based meeting and also used at the meeting itself to organize the discussion;

(5) Civil Case-Type Categories—a reference document listing the civil causes of action comprising each case type appearing on the Civil Case Worksheet;

(6) Instructions for Completing the Criminal Case Worksheet—detailed instructions on how to complete the Criminal Case Worksheet that was enclosed for the purpose of collecting pre-meeting event estimates;

(7) Criminal Case Worksheet—a data-collection instrument reflecting the structure of the criminal case-weighting system as it then existed; used to collect time estimates from judges before the circuit-based meeting and also used at the meeting itself to organize the discussion; and

(8) Criminal Case-Type Categories—a reference document listing the criminal offenses comprising each case type appearing on the Criminal Case Worksheet.

A copy of the full mailing to participants in one of the circuit meetings appears in Appendix J.[12]

Collecting Pre-Meeting Time Estimates

We originally had no plans to collect time estimates in advance of the circuit meetings. We expected only to ask judges to complete and bring the worksheets to meetings for their own use. Our objective was to increase the likelihood that judges would come prepared for thoughtful discussion and thus enhance the efficiency of the group-estimation process.

A few months after we launched the project, however, the Subcommittee learned that the General Accounting Office (GAO) had expressed concerns about consensus-based data—these concerns were found in a report on case-weighting methodology presented to the House of Representatives' Subcommittee on Courts, the Internet, and Intellectual Property.[13] The GAO identified the use of

12. Feedback from judges attending the first two circuit meetings prompted modest revisions to instruction documents. The revisions responded to questions about how to interpret default time values, what time should be included in estimates, and how to handle estimates for infrequently occurring case-type and event combinations. Consequently, the instructions included in the early mailings differed slightly from the set appearing in Appendix J.

13. The GAO report commented favorably on time-study methodology used in previous studies, but raised questions about the current study's event methodology, citing the absence of standard error terms from consensus-based data as a specific drawback (see pp.7–8, 12–13, & 15, *Federal Judgeships: The General Accuracy of the Case-Related Workload Measures Used to Assess the Need for Additional District Court and*

consensus estimates as a drawback to the current study because such estimates cannot be used to generate means or standard error terms, which are essential if evaluation of the resulting case weights is to proceed according to standard statistical protocols.[14]

The Subcommittee was fully committed to using consensus-based estimates in the case-weight calculations. Members were, however, sensitive to the issues raised in the GAO report and wanted to be as responsive as possible to those concerns within the constraints of the study's design. Acknowledging that error statistics could not be computed for the final weights, the Subcommittee decided at its June 2003 meeting to create a data set of *preliminary* time estimates that would be amenable to the calculation of means and standard errors. Accordingly, the members instructed us to gather time estimates from individual judges before the judges agreed on consensus-based estimates. To implement the Subcommittee's decision, we modified the instructions for the circuit meetings to explicitly request that all participants fill out the worksheets and submit their time estimates to the FJC before the meeting.

Information on how the data were collected and processed is provided in a later section of the report titled "Means and Mean Confidence Intervals Computed on Pre-Meeting Estimate Data," *infra* page 31.

Data-Collection Instruments: Civil and Criminal Case Worksheets (Circuit Meeting Version)

To help organize the work of judges at the circuit-based meetings, we developed civil and criminal worksheet matrices to guide the group-estimation process. Worksheets prepared for use at the meetings took on increased significance when they were put to additional use as data-collection instruments for the judges' pre-meeting task. The first page of the civil case worksheet has been reproduced in Figure 1 below.

General Format of the Circuit Meeting Version of the Worksheets

The worksheets presented complex information in such a way as to make the component parts of the case weights transparent. As seen in Figure 1, the worksheets arrayed case events across the top of the matrix and listed case types along the left column. The criminal case worksheet listed thirteen events and twenty-one

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Courts of Appeals Judgeships, GAO-03-788R (Washington, D.C.: May 30, 2003)). The principal author of the study repeated the concerns in testimony before the House Subcommittee on Courts, the Internet, and Intellectual Property on June 24, 2003.

14. The Federal Judicial Center acknowledged in its agency comments on the draft GAO report that the use of consensus estimates precluded us from generating statistical measures of error for the final case weights. The FJC noted, however, that a statistical evaluation was not the only means by which the integrity of the new case-weighting system could be assessed. The FJC advised that a qualitative assessment, focusing on the methods and adherence to defined research protocol, could properly evaluate the case-weighting system.

Figure 1: Sample Page of the Civil Case Worksheet Used in Circuit Based Meetings (page 1)

Civil Case Worksheet

District Court Case Weighting Study
Event Weight Estimates by Type of Case

DOCUMENT # 4

Civil Cases

	Trials and Other Evidentiary Hearings				Non-Evidentiary Hearings and Conferences			In-Chambers Case-Related Activities					Case Adjustments		
Case Type Description	**Jury Trial**	**Non-Jury Trial**	**Hearing on Preliminary Injunction/ TRO**	**Other Evidentiary Hearing**	**Conference**	**Motion Hearing**	**Other Non-Evidentiary Hearing**	**Order on Motion for Summary Judgment**	**Order on a Discovery Motion**	**Order on Any Other Enumerated Motion**	**Trial Prep**	**Hearing Prep**	**Multiple Parties (5 or more)**	**Class Action**	**Motions (more than 50)**
Default Time Estimate *(trials in hours, other events in minutes)*	23.0 hrs	12.6 hrs	3.7 hrs	3.2 hrs	31 mins	28 mins	28 mins	72 mins	26 mins	45 mins	30 mins	30 mins	0 mins	0 mins	0 mins
Admiralty															
Admiralty	21.5	11.7	2.5	2.7											
Bankruptcy															
Bankruptcy Appeals and Withdrawals	32.5	12.4	2.1	3.2											
Banking and Finance															
Banking and Finance	23.2	10.8	3.2	2.2											
Commercial Litigation															
SEC, CFTC, and Similar Enforcement Actions (US Plaintiff)	–[1]	20.8	3.4	1.6											
SEC, Commodities, and Stockholder Suits (non-US Plaintiff)	39.2	17.5	3.1	2.3											
Civil RICO	48.6	22.0	4.7	2.8											
Antitrust	66.6	53.1	9.8	3.4											
Other Fraud	30.1	13.4	4.0	2.6											
Interstate Commerce	–[1]	15.0	--[1]	–[1]											

[1] An estimate of trial time was not presented if there were less than 20 trials in the category.

case types; the civil worksheet listed twelve events, three potential case adjustments, and thirty-nine case types.[15] Some events were identical across civil and criminal worksheets; others were unique. The intersection of a column and row heading defined a single cell representing a unique combination of event and case type.

Events were grouped by conceptual category, and categories were color-coded to facilitate reference to them in accompanying instructions. Categories common to both the civil and criminal case worksheets were (1) Trials and Other Evidentiary Hearings (shaded blue), (2) Non-Evidentiary Hearings and Conferences (shaded orange), and (3) In-Chambers Case-Related Activities (shaded green). The civil worksheet included one additional category labeled Case Adjustments (shaded yellow).

In the four sections that follow, we discuss time estimates listed on the worksheets under each of these conceptual categories.

Preprinted Time Estimates for Trials and Other Evidentiary Hearings Events

The first section on each worksheet depicted Trials and Other Evidentiary Hearings events. Cells in this section contained preprinted time values obtained from our analysis of time data reported on JS-10 forms. The listed times were the average number of hours required to conduct trials in each case type. If fewer than twenty trials occurred in an event cell, we entered a dash on the worksheet. The listed trial times were provided for informational purposes only.[16]

Default Time Values for Non-Evidentiary Hearings and Conferences Events

The remaining cells on the worksheets were blank, and the objective of the pre-meeting task was to obtain time estimates from individual judges for every blank cell. The worksheets provided context for this task through the listing of a default value for each of the remaining event types. The default appeared at the heading of each event.

Instructions advised judges to consider the defaults as starting points when working out their own estimates. Judges were told to determine, for each empty cell corresponding to a particular case type, whether the default value was a good estimate of the time required to complete the activity or event in the case type. If their experience suggested the default value was appropriate for the case type, they were to leave the cell blank, signaling that the default value was the estimate the judge would have recorded there. If judges determined that the default value

15. Participants of the National Consensus Meeting later expanded the number of civil case types to forty-two, reduced the number of civil case adjustments to two, and added three case adjustments to the criminal case-weights structure.

16. Refer to "Computation of Objective Trial Time Estimates," *supra* page 19, for a description of the data used to derive the objective time estimates. We did not report trial averages on the worksheets if the averages were based on fewer than twenty trials, but did use them in the case-weight computations. Because the frequency value for such combinations is negligible, these combinations have no discernible impact on the resulting case weight.

did not represent the amount of judicial time required to complete the case activity, they were to record in the worksheet cell a value that better represented their experience.

Default values listed for Non-Evidentiary Hearings and Conferences events were derived from the back side (page 2) of the JS-10. Defaults in the orange-shaded section of the worksheets are across-case-type time averages, derived through regression analyses. Because of the structure of JS-10 data, the averages made no distinctions between any case types, not even the distinction between civil and criminal cases for the defaults assigned to conference and motion hearing events. Consequently, the default time value for pretrial conferences in criminal cases is the same default listed for civil cases: thirty-one minutes. The lack of specificity similarly affects the default values for motion hearing and other non-evidentiary hearing events.

At Appendix H we provide additional information about the analyses used to derive Non-Evidentiary Hearings and Conferences event default values.

Default Time Values for In-Chambers Case-Related Activities

While JS-10 data were critical to the development of default values for Non-Evidentiary Hearings and Conferences events, they were not useful in developing default values for In-Chambers Case-Related Activities events. The absence of data from the JS-10 or other routine statistical reports had prompted us, after receiving support from the Judge Advisory Group, to investigate whether data submitted by judges for the 1993 Time Study might inform estimates of in-chambers events.

We found that although the 1993 Time Study data did not support the calculation of default values for hearing and trial-preparation events, the data could be used to compute defaults for other in-chambers events, subject to some important limitations. The limitations arose from the age of the time study data, the imperfect correspondence between categories of data in the old and new studies, and an artifact of the way the time study data were reported, which could be expected to introduce a downward bias in some of the event time averages.[17]

We computed averages from 1993 Time Study data and recommended to the three-judge subgroup of the Judge Advisory Group that these results be incorpo-

17. Some of the current study's in-chambers case-related events corresponded closely to categories used by judges to classify time entries in the 1993 Time Study (e.g., order on summary judgment motion, order on suppression motion, and order on discovery motion). The correspondence between "order on other enumerated motions" (both civil and criminal) and the 1993 categories was less precise, however, so we used the available 1993 categories to construct best-match indices and used the time reported for all the relevant categories to compute default value averages. The default value for the civil event of "order on other enumerated motions," for example, was based on time reported by judges when they handled various dismissal motions, motions to remand to state court, TROs, preliminary injunction motions, attorney fees motions, magistrate judge reports and recommendations, class action issues, and motions to vacate sentence. We were unable to aggregate related entries to reflect the total time spent on a particular order. As a consequence, the default values were averages based on individual time-study entries rather than averages based on the total span of time working on one particular order.

rated into the worksheets, their limitations notwithstanding. We recommended inclusion because the values were plausible and could help counteract a tendency on the part of judges to overestimate event time. The working group concurred with the recommendation. Worksheet instructions pointed out the limitations of the defaults.

Two of the events appearing in the In-Chambers Case-Related Activities section of the worksheet involved the time judges spent in last-minute preparation for an imminent trial or hearing. Because no objective data existed to inform estimates of the time needed to prepare for these proceedings, staff asked the Judge Advisory Group to establish default values based on the group's collective experience. The suggested values (of thirty minutes each) were included on the worksheets, with instructions noting the source.

Case Adjustments on the Civil Case Worksheet

One additional category, Case Adjustments, appeared on the civil case worksheet. Case Adjustments included three case-related characteristics that, when present in a case, had the potential for significantly increasing the amount of judge time required to manage a case, according to several members of the Judge Advisory Group. The Judge Advisory Group decided to solicit additional input from judges attending circuit meetings on whether the identified case adjustments should be included in the case-weighting structure.

The case adjustments under consideration at the time the circuit meetings were held included the presence of multiple parties (five or more), designation as a class action, and motions in excess of fifty. The unanswered question was whether the presence of any of these characteristics made time demands that were not otherwise reflected in docketed case activities. Both the pre-meeting task for circuit meeting attendees and their consensus-based response to the case-adjustment factors would inform the answer.

Because the goal was to get unbiased feedback from judges, case adjustments were listed on the civil case worksheet with default values set to zero. Setting the default values to zero presumed that these factors did not have an independent impact on judges' time. To overcome the presumption, judges needed to record values in the cells of the matrix or establish a different default.

The instructions cautioned judges against the tendency to assume that an adjustment was indicated simply because the presence of these case characteristics might signal an increased number of events such as hearings, conferences, and motions. Judges were reminded that time associated with *more* events would already be registered in analyses. The question to consider was whether the mere presence of the characteristic required additional case work not accounted for by docket entries and time estimates associated with the case type. If the answer was "yes," judges were asked to record how much additional time, on average, would be required to handle the case.

Worksheet Instructions

Instructions that accompanied the worksheets described the events in each category and specified the activity to be included in the time estimates. Judges were told that their estimates should exclude time spent by magistrate judges and law clerks, and that they should focus their attention on typical case events rather than especially lengthy or time-consuming events. The instructions additionally advised judges on how to estimate time for event and case-type combinations that occur infrequently.

Worksheet instructions explained how judges were to handle default values. They were told to decide whether the default value listed for an event was a reasonable estimate of the average time required to handle the event in a generic case type. If the preprinted default value was reasonable, the judges were told to leave it untouched; otherwise, they were asked to strike the default value and record a more appropriate value instead. If a judge provided a different default value, the substitute became the default value.

Judges then determined whether the default value was applicable to individual case types. If the default was a good estimate of how much time the event took for a given case type, judges were to leave the cell blank. If the default did not apply to the case type, the judge entered an estimate that better matched the judge's own experience with the case type.

Means and Mean Confidence Intervals Computed on Pre-Meeting Estimate Data

We received 95 worksheets from the 102 judges participating in circuit-based meetings. Two of the worksheets were submitted by liaisons who were not serving as representatives of a specific court, but rather as at-large members of the circuit; one was submitted as the result of a collaborative effort between two judges attending the meeting from a single court.

Several judges advised us that they had consulted with chambers staff, courtroom deputies, or judicial colleagues while completing the sheets. Collaboration was likely to have been the exception, though; most judges appeared to have provided estimates based solely on their own experience.

The frequency of missing data was low, overall. The recording of default values at the top of each column allowed judges to leave cells blank wherever the default value was considered appropriate; these blank cells were then set to the default value during data entry. Judges occasionally recorded "N/A," placed a question mark, or wrote a query in cells of the civil and criminal matrices that represented event and case-type combinations that their experience suggested should not occur. These notations were seen most frequently in the cells involving

Social Security cases and espionage and terrorism cases.[18] We treated them as missing data.

For purposes of reporting means and confidence intervals we also treated entries recorded in units other than time (e.g., "twice as much," "100% increase") as missing data. Such entries were most often concentrated in the Case Adjustments section of the civil worksheet.

The Case Adjustments section was intended to provide feedback on whether or not such adjustments were useful. The pre-meeting feedback, however, was ambiguous. Analysis revealed that judges tended to accept the zero as default values by about a 2:1 ratio (with acceptance rates ranging from 50%–85% across different case types). This outcome suggests one of two possibilities—judges were signaling that no adjustments were needed in the case-weighting structure or they found it difficult to describe the relationship between time and case adjustments in the format asked of them.

On the basis of feedback received in the first two circuit-based meetings, we became convinced that the procedure for collecting pre-meeting case-adjustment information was flawed and the high acceptance rate for the default values was an artifact of judges finding it difficult to describe the relationship in the unit requested (minutes). Judges made clear to us at the first two circuit meetings, as well as in all subsequent meetings, that they believed case adjustments would improve the case-weight structure, but they also indicated that the unit of measurement for adjustments was better thought of in terms of percentage increase (or decrease) in time rather than minutes or hours. As a consequence of the feedback, we told judges in later meetings that they could report their consensus estimates on case adjustments in terms of percentage increases or multiples of time (e.g., twice as much).

We computed means and standard error estimates for all non-trial cells of the civil and criminal worksheets. We then computed the 95% confidence interval around each mean. The means and the upper and lower bounds of the confidence interval are displayed in columns of a table found at Appendix K, along with national consensus values for comparison purposes. The reported statistics for the case adjustments include acceptances of zero as default values.

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18. When judges asked us whether they should provide estimates for event and case-type combinations that theoretically cannot occur, we advised them to consider the question, "If the event were to occur, is there reason to believe it would differ from the default value you established?" Staff explained that many of the event and case-type combinations they considered impossible occasionally are present in courts' case-management databases and would need to be accounted for in the case-weighting system. Such combinations can, for example, occur if a case is improperly categorized at filing or data entry. Alternatively, a case that is correctly categorized at the time of filing can later reveal itself to have other causes of action, and an unexpected case-type event will be found on the docket because the case continued toward disposition under the original case-type designation.

Meeting Logistics

We held meetings in major cities within the circuits and scheduled the meetings to last a day-and-a-half. Eight circuits were able to complete the consensus task in a single day either by agreeing to extend the scheduled workday, by meeting with staff for a project briefing in advance of the meeting, or by conducting their work with particular efficiency.

The first meeting took place at the end of August 2003 and the last one took place at the end of November 2003. Three project staff members—one from the Analytical Services Office of the AO and two from the Research Division of the FJC—typically attended meetings. Staff alternated between serving as facilitators and making a record of the proceedings. With two exceptions, meetings were conducted in hotel facilities (rather than court facilities) to minimize the likelihood that court business would distract judges from the meeting agenda.

Meeting Procedures

At the beginning of each meeting, we distributed materials to judges that included (1) blank copies of civil and criminal worksheets; (2) reference documents listing the cases comprising the civil and criminal case types (i.e., Documents 5 and 8 of the Meeting Information Packet); (3) a final meeting agenda; and (4) a handout of a slide presentation giving an overview of case weighting. Staff ensured that participants had copies or originals of their pre-meeting estimates to work with during the meeting.

The project liaison judge opened each meeting with a prepared set of introductory remarks that covered specific points. The liaison gave an overview of the work of the Judicial Resources Committee and its Statistics Subcommittee, explained the purpose of the circuit-based consensus meeting, and noted that a subsequent gathering of judges in a national forum would establish final time estimates. Liaison judges additionally established the "ground rules" for the meeting. The primary ground rule was a prohibition against judges volunteering anecdotal "war stories" about unusual case matters. During the discussions, the liaison and staff steered discussion away from unusual events when necessary, but after a few reminders, judges tended to monitor the discussion themselves.

After the liaison's remarks, staff made a slide presentation. The presentation gave an overview of case weights and explained why they are used, described the new study, and provided an illustration of how this study would integrate data on event frequencies with time estimates to produce a case weight. (Appendix L includes an example set of slides.)

We answered questions at the conclusion of the slide show. The question-and-answer period ranged from half-an-hour to an hour-and-a-half in length. After a break, judges took up the task of estimating time for events in civil cases.

Estimation Process

Staff used transparencies of the worksheets on an overhead projector to organize the discussion. The worksheets were identical to those completed for the pre-meeting task. After noting that the time estimates recorded in the Trials and Evidentiary Hearings section of the worksheet were fixed—i.e., the estimates would be included directly in the case weights—we explained that participants would work through the other sections of the matrix column-by-column.

We began with the civil case worksheet and asked the judges to debate and agree on a default value for the first blank column. After setting the default, they considered whether a departure was appropriate for each individual case type. Upon completion of the first column, they moved to the next, and continued in a similar manner until they worked through the entire worksheet.

Throughout the process, we reminded judges that (1) the estimate needed to reflect the average time required in their circuit and not the experience of a single court, and (2) the relationship among the values for events and case types should be considered when arriving at a specific value. Judges appeared to intuitively grasp the latter point, and readily agreed among themselves about the case types that tend to consume more judge time for most events as well as the events that take more and less time. The discussions resulted in negotiated time estimates that judges agreed represented their circuit's central tendency.

After completing the civil case worksheet, judges developed estimates for criminal case events. Discussions of criminal estimates were typically less extensive than for civil estimates. We attributed this difference in part to fewer criminal case types and greater experience with the task, but we also observed that departures from the default value were less frequent for criminal than for civil events. The judges offered an explanation for their tendency to accept default values, explaining that a conference (or hearing or suppression motion) was much the same in one type of criminal case as it was in another, with just a few exceptions.

Comparison of Obtained Estimates Across the Circuits

Civil and criminal estimates obtained across the circuits exhibited several notable characteristics. The most obvious was that estimates for the same event and case-type combination varied widely from one circuit to the next. Some portion of the difference is no doubt the result of real differences in time demands. However, most of the difference appears to be an artifact of the judgment process. Some circuit groups coalesced around higher values, whereas other circuit groups were conservative estimators.

Less obvious, but as it turns out more significant, are the consistencies displayed across circuits. Events associated with high and low estimates were the same across circuits. Thus, for example, circuits tended to assign higher time values to the Order on Summary Judgment event than they did to the Order on Any Other Enumerated Motion event, and higher values to the Order on Any Other Enumerated Motion event than they did to Order on a Discovery Motion event.

In addition, the case types that judges singled out for departures from the defaults tended to be consistent across circuits. Circuit groups consistently assigned higher time estimates to events associated with the following civil case types: Antitrust, Civil RICO, Copyright and Trademark, Death Penalty Habeas Corpus, Environmental Matters, Patent, and SEC/CFTC/Similar Enforcement Actions (U.S. Plaintiff). They assigned the highest time estimates for criminal events to Continuing Criminal Enterprise, Espionage and Terrorism, All Extortion/Threats/RICO, and Murder/Manslaughter/Homicide case types. As a result, although circuits differed with respect to the absolute amount of time judges estimated for different events and case-type combinations, the relationship between events and case types was largely preserved across the circuits.

Circuit-Based Recommendations to Modify the Case-Weights Structure

Participants in many of the circuit-based meetings discussed changes to the worksheets, changes that they believed would improve the precision of the resulting case weights. A number of these discussions led to a formal recommendation from the circuit to modify the case-weights structure. Suggested modifications took the form of added events or case types, alterations to the case-weight design, or proposals to restructure existing events. A number of circuit groups additionally offered advice on whether more than one case adjustment should apply to a given case.

We responded to such discussions by offering to make a record of the resulting recommendations and by forwarding the recommendations for consideration by representatives attending the national meeting. We advised participants that the feasibility of any particular recommendation would depend on whether data from the courts were able to support the recommendation's implementation.

Examples of recommendations arising from circuit-based meetings included the following:

- establish Bankruptcy Appeals and Bankruptcy Withdrawals as separate case types;
- establish a new criminal case type for offenses that are eligible for the death penalty, or, alternatively, incorporate into the case-weighting system a case-adjustment factor that is applied to each offense type for which the death penalty is a possible sentence (e.g., Murder/Manslaughter/Homicide, Espionage and Terrorism);
- separate the Orders on Other Enumerated Motions event category into two events that distinguish dispositive and more substantive motions from all other orders included in the category;
- apply an adjustment to criminal cases where an interpreter is present; and
- expand the definition of the tasks included in the Trial Preparation event to include such activities as preparing for voir dire, developing preliminary

instructions, developing final jury instructions, and conducting mid-trial legal research.

Information summarizing the various circuit-based recommendations and the national meeting response to them is found in Appendix O.

Meeting Reports

Individual circuit reports summarized the proceedings of each meeting, including the consensus estimates and any circuit-based recommendations to modify the initial case-weighting system. (An example of one of the reports is found at Appendix M.)

Post-Meeting Telephone Debriefings

In the days following each meeting, the liaison judge met with staff and other liaisons by conference call to conduct a debriefing. The initial debriefings helped to prepare other judges for the liaison role in succeeding meetings and provided staff and liaison judges with an important forum for the exchange of information. Feedback on the first two meetings resulted in minor adjustments to preparation materials and meeting procedures.

To avoid having estimates from one circuit meeting contaminate the results of subsequent meetings, participants in the telephone debriefings took care to avoid discussion of specific estimates.

National Consensus Meeting

In January 2004, approximately two months after the last of the circuit-based meetings was held, representatives from those meetings met to reconcile differences among the circuits' estimated event times and to agree on estimates reflecting the average, *national* experience. These time estimates were incorporated into the case-weight computations.

Participants

Project staff consulted with the liaison after each circuit-based meeting to identify two judges that they would ask to attend the National Consensus Meeting as circuit representatives. The list was drawn up on the basis of demonstrated interest in the project and constructive contribution to the circuit meeting. The liaison judge or a staff member approached candidates informally to request their continued assistance with the project and, with few exceptions, those who were approached agreed to serve.

Twenty-two district judges—two from every circuit except the Third Circuit, whose representatives had to cancel at the last minute for personal reasons—attended the National Consensus Meeting.

Meeting Materials

Approximately three weeks before the National Consensus Meeting, we mailed participants an information packet with a cover letter from the chair of the Statistics Subcommittee.[19] The information packet consisted of the following documents, which were numbered for reference purposes:

(1) Information for Judges Attending the National Consensus Meeting of the 2003–2004 District Court Case-Weighting Study—describing the objectives of the meeting and how it would be conducted;

(2) Meeting Agenda—a preliminary schedule and a list of judges expected to attend;

(3) Original Civil and Criminal Case Worksheets—we enclosed these documents for reference, with an explanation that they would be modified for use at the National Consensus Meeting according to feedback the recipients provided us on various circuit-based recommendations summarized in Document 4; and

(4) Evaluation of Circuit-Proposed Modifications to the Case-Weights Structure—a summary of the circuit-based recommendations in a ballot format that recipients used to inform us, before the national meeting, about which of the circuit recommendations should be incorporated into the case-weighting structure.

A copy of the full mailing to the participants in the National Consensus Meeting appears at Appendix N.

Decisions on Circuit-Based Recommendations to Modify the Case-Weights Structure

We provided a detailed evaluation of the various circuit-proposed modifications to the case-weighting structure in the information packet. The evaluation recommended adoption of a few specific changes and presented information for judges to consider in deciding which of the other proposals to adopt.

Twenty judges voted on the proposals in advance of the national meeting. We incorporated the changes that received a majority endorsement into materials pre-

19. Included in the mailing was an offer to send circuit representatives reports summarizing the circuit-based meetings for review. Nine of twenty-four judges acted on the offer.

sented at the meeting.[20] At the meeting itself, we asked judges to decide how we should implement some of the changes they requested. For example, judges identified which motions contained in the Order on Any Other Enumerated Motions event should remain in that category, and which should be moved to the newly created Order on Dispositive Motions event. Information summarizing the majority-endorsed changes appears at Appendix O.

Meeting Logistics

The National Consensus Meeting convened for two days beginning January 29, 2004, in San Antonio, Texas. Two project staff members facilitated the meeting. Other staff recorded the outcome of the balloting process and operated electronic voting equipment.

Meeting Procedures

We distributed a binder of meeting materials to judges at the beginning of the first day's session. The binder included (1) civil and criminal worksheets that had been revised to reflect the vote on modifications; (2) an opening slide presentation reproduced as a handout; (3) a series of graphs summarizing the range of circuit-based time estimates for civil and criminal events; and (4) the meeting report from the particular circuit that the recipient judge represented. The worksheets and the graphs guided discussions over the course of the two-day meeting. (See Appendix P for an example set of binder materials.)

The director of the Federal Judicial Center opened the meeting by welcoming participants. The chair of the Judicial Resources Committee followed with an explanation of the process for evaluating requests for new district court judgeships. The chair of the Statistics Subcommittee provided an update on the case-weighting project and then turned the meeting over to staff facilitators.

We oriented judges to the meeting task with a slide presentation that reviewed event-based case weighting, summarized the changes to the case-weighting structure that participants had voted to accept, and explained the decision-making process for determining final time estimates. Judges then began work on consensus estimates in criminal cases.

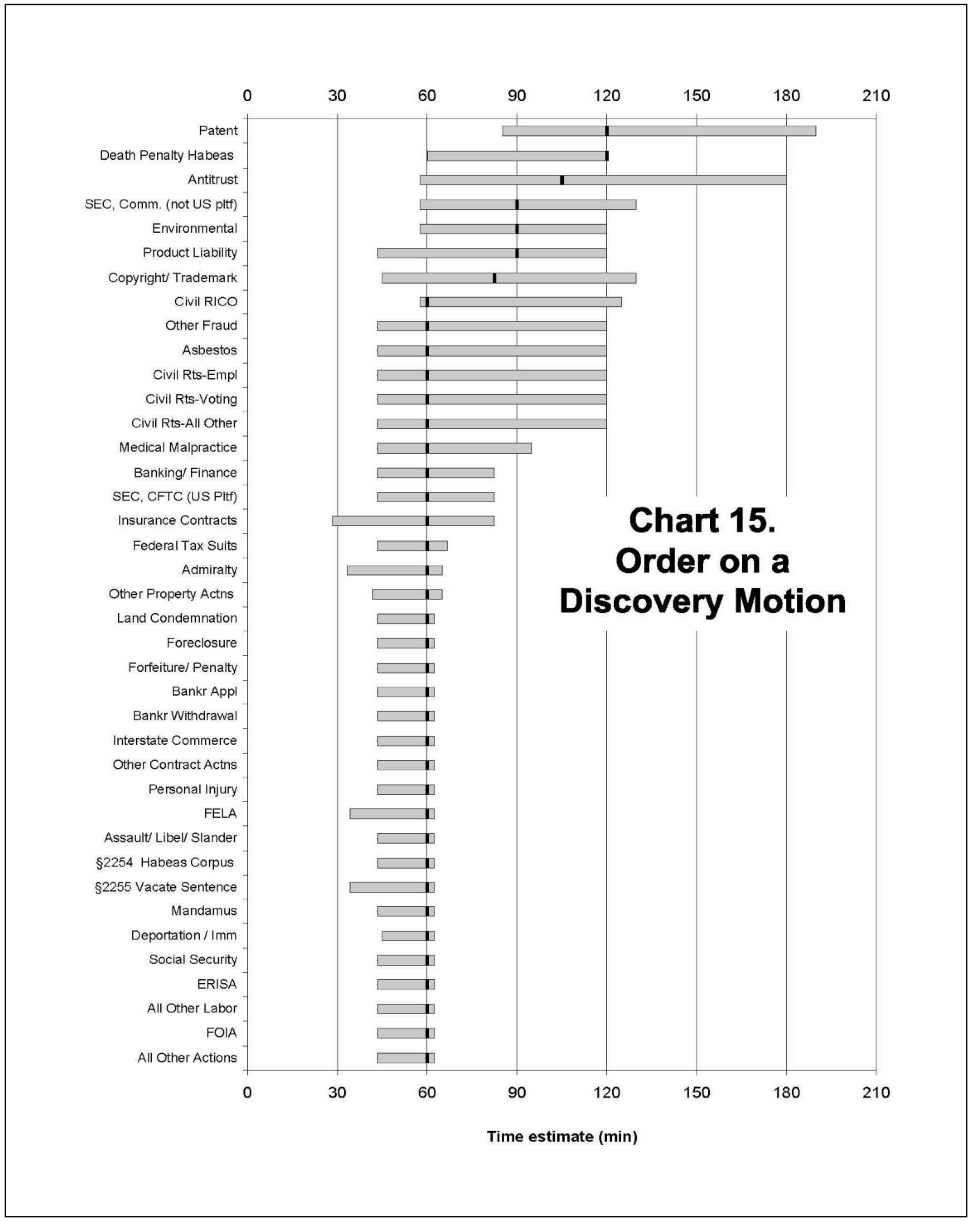
Estimation Process

Judges engaged in a structured, data-driven consensus process to establish the national event estimates. They first reviewed a series of horizontal bar charts for each criminal event. The bar charts displayed two pieces of information for each case type—the median value of the circuit time estimates and the range of esti-

20. The majorities that emerged were strong, with twelve or more judges endorsing the same position on all recommendations except one, where there was a three-way split of five, six, and nine votes distributed among three options on how to divide a single case type into two separate case types.

mates, with the two highest and two lowest estimates excluded. Case types were arrayed so that case types with the highest median value appeared at the top of the chart and case types with the lowest median value clustered at the bottom. An example of one of the summary charts used in the national meeting appears in Figure 2.

Figure 2: Sample Chart Used at National Consensus Meeting



The charts showed relative relationships among the case types and exposed patterns in assigned estimates that were consistent across circuits, even though estimates for many of the events were quite varied. The charts provided visual confirmation, for example, that circuit meeting participants tended to assign high event processing times to a limited set of case types, repeating the pattern across a number of case events.[21]

Led by project staff, with assistance from the chair of the Statistics Subcommittee, the judges examined factors influencing the circuit variations shown in the bar charts and used an electronic voting device to register judgments about values that best reflected a national average. The voting device provided direct visual feedback on the outcome of votes. After participants mastered the initially cumbersome voting procedure, the consensus process moved forward efficiently while still ensuring full analysis of important, case-related issues. Case types with high processing times stimulated more discussion than others. Case types with shorter median time estimates tended to be voted on as a group, unless one or more judges singled out a specific case type for special consideration.

The voting procedure was iterative. Consensus was defined as having occurred when seventeen or more of the twenty-two participants endorsed a specific event time. The first round of voting frequently resulted in split decisions that failed to meet the consensus criterion, so participants engaged in as many as two additional rounds of discussion and voting. If two additional rounds failed to achieve consensus the voting stopped, and the median estimate from the third vote was accepted for use in the case-weight computation.

At appropriate times during the meeting, we asked the judges to make decisions regarding the changes they recommended to the case-weighting structure. The decisions involved reclassification of motions, specification of what judge time to include in trial-preparation estimates, and determination of whether the class action adjustment in civil cases should, if possible, apply only to certified class actions or whether it should incorporate the broader category of cases having a class action allegation. We also asked the judges to choose between two approaches for implementing an additional case adjustment that they requested (i.e., an adjustment for multidefendant trials). Appendix O contains a summary of all modifications to the case-weighting structure arising from decisions made by the circuit representatives to the National Consensus Meeting—either by ballot before the meeting or at the meeting itself.

Judges extended their work day on the first day of the meeting and reconvened early the second day to finish criminal estimates. They spent the remainder of the two-day meeting deliberating and voting on civil estimates. We modified

21. The civil case types included in this set were Antitrust, Civil RICO, Copyright and Trademark, Death Penalty Habeas Corpus, Environmental Matters, Patent, and SEC/CFTC/Similar Enforcement Actions (U.S. Plaintiff); criminal case types included Continuing Criminal Enterprise, Espionage and Terrorism, All Extortion/Threats/RICO, and Murder/Manslaughter/Homicide. See the discussion of circuit-based data at "Comparison of Obtained Estimates Across the Circuits," *supra* page 34.

procedures on the second day to focus discussion on case types with greater variability; this change both streamlined the process and took advantage of groupings of case types with similar median estimates.

Final Consensus Estimates

The final time estimates used to calculate case weights—including estimates derived from objective data as well as consensus proceedings—are reproduced at Appendix Q.

Blank pages inserted to preserve pagination when printing double-sided copies.

Part IV. Data Extraction and Data Processing

Two elements are needed to perform event-based case-weight calculations: estimates of judicial time and estimates of the frequency of case events used in the case-weight computations. The preceding section described the various ways we obtained time estimates. This section describes how we derived estimates of event frequency from docketed event information recorded in the case-management databases of the federal district courts. These estimates are based on data we received from eighty-seven of the ninety-one Article III district courts, covering more than 297,000 civil cases and criminal defendants.

Preparing for Data Extraction

The case-management databases in the courts contain extensive detail on case events. This detail makes the databases an ideal source of information for an event-based case-weighting study. Because the databases are designed for administrative rather than research purposes, however, the information they contain presented us with a number of challenges. For example, the databases have system features that allow courts to adapt their docketing to local case-management needs. Use of the feature results in court-specific variations that complicate efforts to develop a national research data set. To use the richly detailed information found in courts' case-management databases, we first had to develop measures for obtaining data from different courts and then standardize the data we received so that it could be used in a national analysis. Before we could even begin to plan for the data extractions from the databases, however, we recognized that we needed information about the differing docketing practices that are in use.

Survey of Court Docketing Practices

Acting on the advice of the Technical Advisory Group, we conducted a survey of the district courts. The purpose was to obtain information on varying docketing practices so we could recognize and account for variations when we later processed docket information.

The survey included four parts: (1) a request for contact information for a liaison at the court in case we needed follow-up; (2) general questions about the court's case-management system, and the nature of customizations made by the court to their database; (3) questions about how case events were docketed in various situations; and (4) a request to identify any court-specific issues that we would need to take into consideration when extracting data from the court's database.

We sent the survey to the clerk of each Article III district court in August 2003 with a cover letter providing background information and advising the clerk that he or she might need to consult with systems or operations staff to answer

some of the items. The initial response to the survey was high (74%), and with an additional reminder and other follow-up efforts, we received a 100% response.

We used the survey responses for a variety of purposes. The responses guided the development of the data-extraction programs, identified potential extraction and analysis problems that we would need to address, determined which data-extraction package we would send to each court, and highlighted areas where court customizations or local practices might affect the level of detail that would be obtained. The survey information helped us understand the structure of each court's data, as well as the processing each court's data would require.

A copy of the docketing survey and additional information on its administration are provided at Appendix R.

Understanding Docket Entries

A docket entry is represented in a case-management database as one or more data records that use codes, either numeric or text, to identify such things as (1) the case associated with the entry; (2) the nature of the docket entry; (3) any relationship to other entries; (4) outcome or context information; and (5) the party or judge who participated in the event. For example, the data record generated when a party files a motion includes case identifiers (e.g., docket number), a code defining the entry as a motion filing, and a code that specifies the relief requested (e.g., to dismiss the case). If a judge then holds a hearing on the motion or issues an order, the docket entry for this later activity will record not only the occurrence of the hearing or order events, but will also refer back to the original motion and include information such as who presided at the hearing and what ruling was issued. The physical representation of this information varies according to the docketing system a court uses (ICMS or CM/ECF), but the general concept is consistent across systems and courts. To calculate event frequencies, we needed to obtain not simply the docket records from the courts' databases, but also information on how to interpret the courts' docketing codes.

Interpreting Court Docketing Codes

Most of the docketing codes used by courts are standard codes that were predefined when the system was first implemented.[22] Courts can, however, customize the initial codes, and many of them do so in order to respond to court-specific needs. Customization takes the form of newly created codes or codes that have their meaning altered. The practice of customization meant that we needed information from each court about the meaning of the codes we would encounter in the court's database information.

22. The court starts with one of three basic sets of pre-defined codes: (1) a set developed by the Arizona Training Center for ICMS; (2) a set developed by the Texas Training Center for ICMS; and (3) a set for CM/ECF. With a few exceptions (primarily early test courts for each of the systems), all courts using the same basic docketing system started with the same codes.

To obtain this court-specific information, we gathered event-code lists from all but one of the eighty-seven courts that sent us data for the study.[23] The code lists came to us by two routes. ICMS courts executed a special program that system managers could download from the AO's Systems Deployment and Support Division website to generate code lists. Code lists from CM/ECF courts were, by contrast, simply obtained as part of the data-extraction process. Appendix S includes examples of the court code lists.

Standardizing Docketing Codes Across Courts

Obtaining code lists allowed us to interpret individual court codes. With codes in hand, we began the process of categorizing a multiplicity of codes into a uniform system.

Case events to be counted in the case-weighting calculations fell into four conceptual categories: trials, hearings, conferences, and orders. A fifth category, adjustments, dealt with characteristics of a case rather than occurrences of specific events. These conceptual categories were further differentiated into the subcategories that actually defined the structure of the case-weighting system—e.g., jury trial, non-jury trial, settlement conference, other conference, and various groups of orders.

The subcategories had precise definitions but were relatively broad. Docketing codes that are used in the courts, on the other hand, are quite specific, with different codes describing important variations on the same general event (e.g., answer to the complaint, answer to the counterclaim, answer to the third-party complaint). Such distinctions are critical to case management, but many were too detailed for us to use in their original form. Docketing records also contain a great deal of case activity information that, although important for case-management purposes, was not relevant to the study.

Consequently, we developed a system that translated the plethora of docketing codes used across the courts into standardized, national codes. Drawing on information from starter dictionaries and the lists of event codes used in individual courts, we developed a map of codes that (1) specified how docketed events from individual courts would be classified into event categories and (2) distinguished between events we would, and would not, include in frequency counts.

To standardize the codes, we created a cross-reference table that listed every docketing code used in the courts next to a two-level classification scheme. The first level signified the general event category (e.g., trial, conference, order) and the second level represented the subcategory (e.g., jury trial, settlement conference, order on a summary judgment motion). We aggregated codes that contained excess detail to the subcategory level (e.g., grouping together various motions to dismiss). We also classified codes that indicated the possible presence of a case

23. To process data from the one court that failed to send court-specific docketing codes, we interpreted the court's data in accordance with the description given for the code in the standard code list that was used when the court's database was configured.

characteristic relevant to a case adjustment. Docketing codes for activities that were not relevant to the study were marked with a special code that indicated they should be skipped.

A description of the process used to categorize the courts' docketing codes is included at Appendix T.

Extracting Data from Courts' Case-Management Databases

The data to calculate event frequencies resided in individual district court databases around the nation. We needed to extract the required case data from these local databases and assemble the data into a single national database. The standard reporting capabilities of the courts' systems could not produce the precise data sets required, so we developed specialized case-extraction programs for courts to run.

Extraction Programs

From AO documentation on the structure of the case-management databases, we identified the specific data elements that we had to extract from ICMS and CM/ECF databases. These data elements needed to (1) provide unique case identification and nature-of-suit or offense information for each civil case or criminal defendant; (2) identify the events docketed in each case, along with the docketing codes that defined the nature of the event; (3) identify the parties and judges participating in the case; and (4) provide information linking parties and judges to specific events. The programs extracted the data elements directly from the individual database tables of each court and wrote them out to separate files. These direct extractions placed less of a processing burden on the courts' systems, although they required that the separate elements be merged later during processing at the FJC.

We modeled our extraction programs after existing programs written by the AO and by members of the Technical Advisory Group. They were designed to extract cases terminated in calendar 2002. Separate but functionally equivalent programs were written for ICMS and CM/ECF databases to account for physical differences in the systems. To compensate for possible memory and space limitations in some courts, and to minimize the impact of the extraction on docketing during business hours, we designed the programs to give courts control over when and how the data were extracted.

Technical Advisory Group members reviewed and tested preliminary versions of the programs. The AO provided access to test ICMS and CM/ECF databases that allowed us to incorporate refinements into the programs and conduct additional testing. Two ICMS courts and two CM/ECF courts performed final pilot tests.

Once testing was completed, we sent e-mail to the clerks of all district courts using an ICMS or a CM/ECF database to docket cases. The e-mail provided background on the project, explained the need for docketing data, and requested data extraction. The request included a copy of the appropriate extraction program and instructions to system managers on how to execute the program and transfer the output files to the FJC. (See Appendix U for more information on the data-extraction process and copies of the request, programs, and instructions.)

Response to the data request was excellent. Data were received from sixty-nine of the seventy courts using ICMS and all nineteen courts using CM/ECF. Two courts that split their civil and criminal case docketing between ICMS and CM/ECF sent in data from both systems.

Four courts used docketing systems other than ICMS or CM/ECF. One of the four tried to extract data comparable to what other courts provided, but court staff were able to provide only part of the data elements. Because the court was converting its civil database to CM/ECF, however, the staff volunteered to attempt an extraction of CM/ECF data even though the database was not yet "live." They succeeded in sending us information on the portion of civil cases terminated in calendar 2002 that their court had already converted.

Processing Extracted Data

Having obtained docketing data from the district courts, we began the task of transforming the raw data into data suitable for analysis. There were three phases to this data-processing effort: (1) identification of cases for analysis, (2) initial processing of raw data, and (3) processing of docketed event records.

Identification of Cases for Analysis

The data-extraction programs placed few limitations on the cases that courts extracted from their databases except to require a termination date in calendar year 2002.[24] This approach simplified development of the programs and limited the time it took to execute them. It additionally ensured that we received the broadest range of information possible. During data cleaning, we realized we would need to limit our analyses to cases with the following characteristics:

- *The docket type of the case was either "cv" or "cr."* Most courts docket all cases in the same database, marking the case records with a code that distinguishes one type of case from another. The largest classes of cases

24. We know, however, that sealed cases were frequently excluded from the data sets the courts sent us. Because the CM/ECF database clearly identifies and protects sealed cases with access restrictions, our CM/ECF extraction program specifically excluded them. Our ICMS extraction program did not explicitly provide for exclusion of sealed cases, but we know from responses to the docketing survey that sealed cases are not docketed in the database in all ICMS courts, and we know from direct contact with other courts that some of them chose to exclude sealed cases from the data they transmitted to us.

processed by district judges are civil cases ("cv," 66% of extracted cases) and criminal cases ("cr," 17% of extracted cases). We excluded magistrate judge cases ("m " or "mj," 13% of extracted cases), miscellaneous cases ("mc," 2% of extracted cases), and other specially defined cases (various values, 2% of extracted cases) from further consideration because these cases require little or no processing by district judges.

- *The case involved a single defendant if it was a criminal case docketed in ICMS; all criminal cases docketed in CM/ECF were included, regardless of the number of defendants.* Each criminal defendant is weighted separately in district court case weighting, regardless of whether co-defendants are prosecuted together. In order to calculate criminal case weights using event-based methods, case events must be linked to every defendant involved in the event (e.g., if two defendants are being arraigned together, two arraignments must be counted in the case, one for each). The information linking defendants is consistently available in the CM/ECF, but not the ICMS, database. To manage this problem with ICMS data, we restricted the analysis of ICMS criminal cases to those with a single defendant. Approximately 87% of all extracted ICMS criminal cases were single-defendant cases.
- *The case could be classified into a case type category.* If a civil case lacked nature-of-suit information or a criminal case lacked offense information, we excluded it from further processing because we could not assign a case type category. Less than 1% of civil cases and approximately 10% of criminal defendants were excluded on this basis.

The resulting case population numbered 245,666 civil cases and 51,363 criminal defendants (a total of 297,029 cases from 87 district courts).

Initial Processing of Raw Data

Project staff developed data-cleaning programs to process the raw data from the courts. For data-management reasons and to increase processing efficiency, we initially handled the data from each court separately. Because of structural differences in the data, we used different programs to process extractions from ICMS and CM/ECF databases.

The data-cleaning programs checked for a full range of data-integrity problems, including the following: (1) data type errors in data fields (e.g., alpha characters in numeric fields); (2) unusual or out-of-range values; (3) failure to adhere to the selection criteria (e.g., termination date within calendar 2002); and (4) basic interrelationships among the case components (e.g., all party and event records could be matched to a case record). During processing we also created unique identifiers for each case and record, and we created case flags to help characterize the cases when we later calculated case adjustments.

In keeping with standard data-cleaning practices, we reviewed field frequency reports and processing logs that were generated by the programs to identify problem areas requiring additional review or correction (e.g., deletion of duplicate case records).[25]

Appendix V presents a more detailed description of the data-cleaning programs and procedures.

Processing of Docketed Event Records

Once data cleaning was completed, we processed docketed events from each case in the analysis. This involved first constructing a single record that included case identification information, event docketing codes, other status and context information, and judge information for each docket entry. The event docketing codes were court-specific, so we next appended to each record the standardized general category and sub-category code assigned to the event docketing code (see "Standardizing Docketing Codes Across Courts," *supra* page 45).

We then had a final set of categorized event records. We passed the records through a series of programs that identified and refined the specific docketed events we would use in computing frequencies. These programs acted as filters that permitted case data to proceed only if the data passed various execution checks. The filtering programs used docketing context and sequencing information to control the passage of data from one processing program to the next.

In the initial stages of this processing we handled the data on a court-by-court basis. However, the first set of programs dramatically reduced the number of event records that required further attention, so for final processing we aggregated records from courts using the same database. We used separate but functionally equivalent programs throughout to handle the data from the ICMS and CM/ECF databases. The major operational decisions that directed this processing are summarized below:

- We processed cases one at a time. Consistent with the standard categories established for the project, we allowed events that were included in the case-weight structure to proceed to analysis (e.g., orders, hearings, case indicators) and we skipped events that were not included in the case-weight computations (e.g., clerk's office events, notices, answers).
- We included only events processed by district judges; events processed by magistrate judges were excluded. Events were generally counted if judge information was missing. Some hearing events from CM/ECF courts, however, were excluded because of missing information.

25. Two instances of truncated data submissions by ICMS courts became apparent during data cleaning. One court extracted and sent us only criminal data; the other court experienced a disruption in the extraction process that resulted in submission of few cases meeting the criteria for retention in the analysis. The analysis included all usable cases.

- We counted only one order per motion and only orders that reported a resolution of the matter in whole or in part. To avoid double counting the same event, we excluded docket entries indicating that a matter had been "taken under advisement," "stayed," or "referred."
- We counted all motion hearings regardless of the number of hearings per motion or the type of motion. If several motions were heard in the same hearing, however, we counted only one hearing.
- Some courts docket the scheduling of a hearing but not the holding of the hearing. If a hearing was scheduled and an order was later issued by a district judge, we assumed, even in the absence of a docketed hearing, that the hearing was held, and we generated a hearing record that we included in the counts. This approach allowed us to use context information to avoid an undercounting of hearings on motions.
- During the processing of docket entries received from a court, we occasionally encountered docketing codes that did not exist on the court's code description list. In such instances, we attempted to clarify the event by using other information on the docket entry, evaluating the use of the same code in other courts, and reviewing the docket text associated with the code on electronic docket sheets. We excluded docket entries containing codes that could not be interpreted after these efforts.
- We reviewed the text of all docketed events for keywords indicating whether specific case characteristics that were factors in the case-weight computations were present in the case (e.g., death-penalty-related events such as CJA 30 filings, motions to appoint an interpreter, and motions to certify a class). In addition, we used case information to identify cases with multiple defendants or multiple parties.

More detailed information about the programs and procedures used to process extracted data is included at Appendix W.

Computing Event Frequencies

The final result of the data processing was a single analysis file that contained a data record for every event to be included in the case-weight calculations. Each analysis record consisted of a unique case identifier, the case type of the case, and the event category. We aggregated the events of cases within a case type to produce total counts by case type and event category. We then divided the counts by the number of cases of each case type to generate the average frequency of the events by case type. We used the resulting frequencies in the case-weight calculations.

Part V. Computation of the Case Weights

This section of the report describes the computation and review of case weights in preliminary form, the incorporation of a final case adjustment, and the specifics of the case-weight computation.

Computation and Review of Preliminary Case Weights

By mid-May 2004, we had final time estimates and appropriate frequency information for every event and case-type combination included in the case-weight matrix. The computation of preliminary weights was at that point a matter of (1) calculating raw weights for each case type by summing the product of event frequency and event time across all event types; and (2) dividing each raw weight by the raw weight of the median case type to transform raw weights into relative weights. A detailed discussion of how time and frequency information combine to form case weights is found under the heading "Understanding the Computation of Event-Based Case Weights," *infra* page 54.

The computation of preliminary weights incorporated the case-weight specifications that participants at the National Consensus Meeting settled on, with one major and two minor exceptions, all of which involved case adjustments. The major exception was an adjustment that meeting participants requested to account for economies resulting when multiple defendants are tried together. Time constraints precluded us from including the adjustment in the preliminary weights.

The minor exceptions involved the class action adjustment and the national group's recommendation that only the single highest adjustment be taken into account if a case has more than one applicable case adjustment. We reported at the National Consensus Meeting that we would implement all recommendations that issued from the meeting to the extent that the recommendations were supported by the data we would later receive from the courts. But difficulties identifying the outcome of class action motions confounded our efforts to limit the class action adjustment to class certifications, so we instead applied it to all cases having a class allegation. Data issues similarly compelled us to apply all relevant adjustments to every case.

In mid-May, we briefed the chair of the Subcommittee on the results of calculations and then mailed the preliminary weights, with supporting material, to members of the Judge Advisory Group. The mailing included (1) a staff memo summarizing the results of computations and advising judges on how to interpret tabled information; (2) a table listing the computed raw weight, the relative weight, and the number of cases from which frequency information was derived for each case type; (3) a table comparing case-weight values from the new event-based study and the 1993 Time Study; (4) a table comparing the total weighted filings per judgeship for each court under the 1993 and the preliminary 2004 case-weighting systems; and (5) a table summarizing how we combined event frequen-

cies and time estimates in computations to form the raw weight of each case type. Copies of these materials are at Appendix X.

The chair of the Statistics Subcommittee initiated the formal review of the preliminary weights by inviting members of the Judge Advisory Group and the chair of the Judicial Resources Committee to attend a staff presentation via conference call on May 27, 2004. Seven judges attended the review session wherein we reviewed the weights, summarized outstanding issues (including data issues that required us to slightly modify the case adjustments), and responded to questions.

Our review of the weights included evaluation of the weight for the Espionage and Terrorism case type. On the basis of discussions at several circuit meetings, we had expected the weight for this case type to be considerably larger than the weight we computed (1.08). The weight of 1.08 appears to underestimate the burden associated with many pending espionage and terrorism cases because it is based only on the twelve cases that terminated in 2002—none of which went to trial. As a result, the computed weight reflects a more limited range of case-processing activity than we would expect to find in a larger sample that better represented pending cases and future filings.

The judges reviewing the preliminary weights concurred with our assessment that the low Espionage and Terrorism weight reflected a small sample size and discussed two approaches for dealing with the underestimate. They considered merging Espionage and Terrorism cases with another case type and then asking us to re-compute a weight for the combined category. They ultimately decided, however, to preserve the separate Espionage and Terrorism case type and use the weight as computed until such time as more representative terminations data become available and the weight can be recomputed.

After reviewing the weights, we summarized computational modifications that we made to case adjustments in response to observed data limitations. The judges accepted the modifications.

Finally, we sought input from the reviewers on whether to incorporate the adjustment for multidefendant trials requested by participants at the National Consensus Meeting. We noted that the impact of the adjustment would be minor for all but a handful of specific criminal case types and indicated that implementation might present data-analysis challenges. The reviewers asked us, nonetheless, to include the multidefendant adjustment in the final weights to ensure that the weights represented a balanced estimate of case burden.

Development and Application of the Multidefendant Adjustment

Early in the project, when JS-10 data were initially used to calculate time estimates for trials and other evidentiary hearings, we made an operational decision to use only single-defendant trials and hearings in the computations for criminal

case types. The grounds for the decision were practical: We did not then know whether the structure of the data would permit us to incorporate multidefendant cases into the analysis and, because about 86% of all criminal trials were single-defendant trials, it seemed reasonable to use them to compute average times.

Several judges voiced concern about this decision at the National Consensus Meeting. Their concern originated from the practice of treating every criminal defendant, even defendants who are tried together, as an individual case when calculating weighted district court caseloads. The judges felt that computing case weights using trial times that were derived only from single-defendant trials would overestimate the average trial time required across defendants. They pointed out that trying two defendants together takes less total time than trying two defendants separately. The other judges attending the national meeting found this reasoning persuasive and requested that, if feasible, we account in the case-weight calculations for the time savings resulting from trying codefendants together.

We outlined two possible approaches that we could take to implement the adjustment, one based on their judgment about the magnitude of the time savings and one that we would calculate empirically, using time data from trials. The participants endorsed the empirical approach.

Time constraints prevented us from including the multidefendant adjustment in the calculation of the preliminary weights. By the time the preliminary weights were reviewed, however, we had a plan for implementing the adjustment. The plan required turning once again to JS-10 data for information on the amount of time judges spend conducting criminal trials and evidentiary hearings.

To calculate the time estimates for the adjustment, we focused on records from proceedings completed between 1996 and 2002 in which more than one defendant was tried. Using trial records that previously had been matched to criminal case records, we identified one subset of trials involving two defendants and another subset involving three or more defendants. These data provided a total of 11,460 criminal trials and evidentiary hearings on which to base the multidefendant adjustment.

The specifics of the computation are outlined conceptually in Table 3. When computing the trial component of the weights, we determined the amount of time that each trial event contributed to the case weights by multiplying the average time for single defendant trials by the frequency of the trial event (see calculated case time, line 1 of Table 3). As a result, the preliminary weights took account of only single-defendant trials.

For the adjustment, we computed new event frequencies that distinguished between one-defendant, two-defendant, and three-or-more-defendant trials.[26] We also computed new per-defendant times for each of these subgroups. From these

26. For the cases in our study across all criminal case types, single-defendant trials accounted for approximately 86% of the total. Two-defendant trials accounted for 5% of trials, and 9% of trials had three or more defendants.

event times and frequencies, we calculated the amount of time contributed by each subgroup (see lines 2–4 of Table 3) and summed the results. The sum was the new total time based on the differentiated components (see line 5 of Table 3). Table 3 shows a Partial Multidefendant Adjustment (on line 6) that is simply the difference between the calculated case time on line 5 and the case time on line 1; it represents the average savings in trial time associated with trying some defendants together. We calculated a partial adjustment in this manner for each type of trial (i.e., jury, non-jury, evidentiary sentencing hearings, and other evidentiary hearings), and then added the partial adjustments to obtain the full Multidefendant Adjustment value that we incorporated into the case-weight computation for each criminal case type.

Table 3: Multidefendant Adjustment Calculation Example

Line	Defendant Grouping	Estimated Event Time Per Defendant	Frequency of Event	Calculated Case Time
1	All Defendants	800 minutes	.127	96.0 minutes
2	1 Defendant	800 minutes	.095	76.0 minutes
3	2 Defendants	496 minutes	.026	12.9 minutes
4	3+ Defendants	585 minutes	.006	3.5 minutes
5	Total			92.4 minutes
6	Partial Multidefendant Adjustment			-3.6 minutes

The adjustment had the greatest effect (modest as it was) on case types distinguished by a greater-than-average proportion of multidefendant cases. These case types included Continuing Criminal Enterprise, Extortion/Threats/RICO, and Drug Manufacturing cases, each of which registered a decline of between 3% and 4% in the raw weight value. Unexpectedly, the adjustment produced a slight increase (of less than 1%) in the raw weight of the Murder/Manslaughter/Homicide case type.

With the inclusion of the multidefendant adjustment, the case weights were final.

Understanding the Computation of Event-Based Case Weights

Recall that a case weight represents a calculated estimate of the burden to be shouldered by a judge handling a newly filed case. The estimate is the average burden found for similar cases terminated in the recent past. To arrive at this estimate, event-based weights are computed by combining information on event-

frequency and event-time estimates. Event frequency itself is calculated from the average event activity observed in a sample of cases.

Because of reliance on a sample, computed figures reflecting average event activity represent no actual individual case. Moreover, the weight calculated from the average event activity of a case type may be inaccurate for a single case. Nonetheless, if we look at a sizeable number of cases, the estimated burden for the cases as a group should approximate the total actual burden. These points are central to an understanding of case weights and might best be understood in the context of a concrete example.

Figure 3 displays event information used to calculate the raw case weights for two case types—Patents and Aggravated or Felonious Assaults, Kidnappings—and will serve as the basis for a discussion of how time and frequency combine to form case weights. We discuss the computation of raw case weights first, and then explain the conversion of raw case weights to final, relative case weights. Raw weights represent estimates of the time district judges need, on average, to complete the specified events in a case type; relative case weights indicate how much work is needed to fully process one type of case relative to the typical case. Weighted caseloads are computed from relative weights.

Working Through an Example of a Raw Case-Weight Calculation

Consider the information on the Patent case type displayed at the top of Figure 3. Examination of the 2,455 terminated patent cases extracted from district court databases reveals that 62 of the cases went to jury trial and another 56 of them were tried before a district judge. These trial numbers correspond to trial rates (or to use the terminology of the event-based approach, frequencies) of 0.025 and 0.023, respectively. These frequencies are listed under the appropriate event label in the row marked Frequency of the Patent matrix.

Similar information about the other events in the sample of patent cases is found by following the frequency row across the matrix. District judges held seventy-nine settlement conferences in these cases, which translates to a frequency of 0.032. The number of motions for summary judgment that judges ruled on translates to a frequency of 0.438, and so on.

The second row in the Patent matrix is labeled Estimated Event Time. The numbers located in blue boxes are the objective time estimates calculated from trial time data submitted on JS-10 forms. The numbers in the orange, green, and yellow boxes are the consensus time estimates developed by participants of the National Consensus Meeting.[27]

27. Yellow boxes represent a variation on the straightforward time estimate. They indicate that 5% of time should be added to the calculated case weight to adjust for the proportion of Patent cases characterized as having five or more parties or including a class action allegation.

Figure 3: Case-Weight Calculation Examples

Civil Case Type

Patent

Total Time = 2080 min **Scaled Weight = 4.72**

	Jury Trial	Non-Jury Trial	Hrg on Prelim Injnctn / TRO	Other Evid Hrg	Settle-ment Conf	Other Conf	Motn Hrg / Other Non-Evid Hrg	Order on Mtn for Sum Jdgmt	Order on Discvry Mtn	Order on Subst or Time-Intensive Mtn	Order on Any Other Enum Mtn	Trial Prep	Hrg Prep	Mult Parties (5 or more)	Class Actn Allgtn
Frequency	0.025	0.023	0.046	0.021	0.032	0.773	0.859	0.438	0.466	0.868	0.721	0.048	0.926	0.399	0.002
Estimated Event Time	2826	1602	336	432	90	90	150	1200	120	1080	75	750	105	0.05	0.05
Calculated Case Time	70.7	36.8	15.5	9.1	2.9	69.6	128.9	525.6	55.9	937.4	54.1	36.0	97.2	40.7	0.2

Criminal Case Type

Aggravated or Felonious Assault, Kidnapping

Total Time = 589 min **Scaled Weight = 1.34**

	Jury Trial	Non-Jury Trial	Sent-encng Hrg (evid)	Other Evid Hrg	Conf-ernce	Motn Hrg / Other Non-Evid Hrg	Arrgn-mnt Hrg	Plea Hrg	Sent-encng Hrg (non-evid)	Order on Sup-pressn Mtn	Order on Dispo-sitive Mtn	Order on Other Enum Mtn	Trial Prep	Hrg Prep	Hrg Prep (sent)	Inter-prtr	Death Pnlty	Multi Defts
Frequency	0.157	0.035	0.110	0.037	1.040	1.509	0.349	0.631	0.561	0.075	0.464	1.611	0.192	2.526	0.671	0.060		*
Estimated Event Time	1050	420	90	138	30	45	10	40	60	120	120	15	240	25	60	0.05	0.5	*
Calculated Case Time	164.9	14.7	9.9	5.1	31.2	67.9	3.5	25.2	33.7	9.0	55.7	24.2	46.1	63.2	40.3	1.0	0.0	-6.0

The bottom row is labeled Calculated Case Time. The figures in this row are obtained by multiplying the frequency estimate and the time estimate listed directly above for each event. If a judge has a new patent case and nothing more is known about the case than that the judge will eventually conduct a jury trial, the best guess about the amount of time the judge will spend on that trial would be 2,826 minutes (just over 47 hours). A jury trial, however, is held in only 25 out of 1,000 patent cases. Consequently, to estimate the time a judge will spend processing a newly filed patent case, case weights credit only the portion of total time accounted for by a single case. To be concrete, the full trial time is multiplied by the likelihood that the trial would occur. Thus, the estimated judge time attributable to jury trial is 70.7 minutes (70.7 = 0.025 x 2826) and the estimated time for non-jury trials is 36.8 minutes (36.8 = 0.023 x 1602). The inclusion of both jury and non-jury trial time in the case-weight calculation demonstrates the previously noted point that the event averages represent no actual individual case.

The same calculation is applied to the remaining events (e.g., non-jury trials, settlement conferences, orders on motions for summary judgment) to determine the time burden imposed by each. We see from the bottom row of the Patent matrix that two events contribute heavily to the high case weight calculated for this case type. The time associated with preparing orders on substantive motions, averaged across all Patent cases, is estimated to consume more than 900 minutes (15 hours), and orders on motions for summary judgment consume more than 500 minutes (8.3 hours). These event categories stand out both because the time estimate is substantial and because there is a relatively high likelihood that a newly filed patent case will include a ruling on one of these types of motions.

The raw case weight is obtained by adding together all of the calculated case times appearing in the bottom row of the Patent matrix. This weight is shown as 2,080 minutes (34.7 hours) next to the Total Time entry.

We computed the raw case weight for the Aggravated or Felonious Assault, Kidnapping case type in a similar manner. Note, however, that the frequency entry and the estimated time entry for the multidefendant case adjustment are missing—the relevant cells are instead filled with an asterisk (*). The asterisk appears in the table only because this adjustment was calculated by combining event frequency and time from multiple subsets of data (as shown in the example presented in Table 3, *supra* page 54), and we decided that listing all levels of the parameters was excessive. The value that summarizes the adjustment, however, appears in the bottom row (-6.0 minutes), and is summed with the other calculated case-time events to obtain the Total Time entry of 589 minutes (9.82 hours).

Converting Raw Weights to Relative Weights

Relative weights, rather than raw weights, are used to compute district court weighted caseloads because relative weights result in values that have a unit of measurement and a range of magnitude that is readily understood. Relative

weights have the additional advantage of facilitating direct comparison of the burden associated with different case types. On average, a case type with a relative weight of 2.00 takes twice as much processing time from a judge as a case type with a weight of 1.00.

Relative weights are computed by dividing raw weights by a scale value. The scale value used in case-weighting studies is the raw weight value of the "typical" case. When we calculated the case weights, we identified three possible scale values, each of which corresponded to a slightly different definition of the "typical" case: (1) the raw weight value of the median case type (equal to 441 for the final weights); (2) the average of all raw weight values weighted by the number of cases in a case type (equal to 439); and (3) the raw weight value of the median case (equal to 386).

The differences between the scale options were slight, and we chose to divide raw weights by the raw weight value of the median case type, which was All Other Felonies. Our choice turned on two considerations—this scale value returned a cluster of case types around the 1.00 baseline that appeared to us to be "typical," and the choice was easy to explain to the Judge Advisory Group. Members of the group confirmed that the clustering case types were typical when they reviewed the preliminary weights.[28]

The resulting relative weights ranged in value from a low of 0.10 for Overpayment and Recovery cases (which are primarily student loan cases) to 12.89 for Death Penalty Habeas Corpus cases. The highest weighted criminal case type was Continuing Criminal Enterprise at 4.36. The new weight for Death Penalty cases extended the range of weights significantly beyond the range of the old case-weighting system—Death Penalty cases previously were weighted 5.99—but the magnitude of the scaled weight values was otherwise similar. With respect to the case-type examples from Figure 3 above, the relative weight values (referred to in Figure 3 as scaled weights) are listed opposite the Total Time entry.

28. The case types falling within ± .02 of the 1.00 baseline were All Other Labor (5,782 cases), All Other Felonies (2,194 cases), Firearms (5,470 cases), All Other [Civil] Actions (12,008 cases), and All Fraud (7,038 cases).

Part VI. Action on Final Case Weights

This section of the report describes the sequence of events leading to formal adoption of the final case weights and describes case-weight information prepared for dissemination to the courts.

Submission of Final Weights to the Statistics Subcommittee

We submitted final weights to the Subcommittee for review and approval at its meeting on June 15, 2004. We provided background and supporting documents modeled after materials we sent when the judges conducted their review of preliminary weights. These materials included the following:

- Table 1, Final Case-Weight Values—presenting raw and relative weights in descending order by case type;
- Table 2, Comparison of New and Existing District Court Case-Weight Values—listing, for comparison, 1993 case-weight values for all of the nature-of-suit and offense codes that comprised the 2004 case type categories;
- Table 3, Comparison of Total Weighted Filings Per Judgeship: Calculations Using 1993 and Final 2004 Case Weights—depicting the impact on weighted caseloads of using new weights and 1993 weights; and
- Table 4, Computation of Case Weights by Case Type.

Copies are located at Appendix Y.

Table 1 of these materials listed the final raw and relative weights for the new case types in descending order and is presented in Figure 4. Civil and criminal case types appear in separate columns to promote identification of category-specific relationships.

Table 2 compared the weights derived from the 1993 Time Study and the current study. Many of the differences between these weights are small, but differences for a handful of case types are striking. Differences are to be expected, of course, since the new weights reflect changes in case-management practices that have been implemented over the past decade. New weights for the largest criminal case-type categories—including Immigration Offenses, All Other Felonies, and the various drug offenses—tend to be smaller than the corresponding weights from the 1993 study. A notable exception to the decrease in weights for drug offenses, however, was Continuing Criminal Enterprise, which saw a substantial increase in its associated case weight. In contrast to criminal case types, weights for several civil case categories saw considerable increases. Such case types included Death Penalty Habeas Corpus, Environmental Matters, Patent, Civil Rights (Voting), Antitrust, and FOIA.

Figure 4: Final Case-Weight Values Presented to the Subcommittee for Approval

Federal Judicial Center — Revised District Court Case Weights

TABLE 1. FINAL CASE WEIGHT VALUES

Civil Case Type	Criminal Case Type	Number of Cases	Raw Weight (Total time) (min)	Scaled Weight (no units)[6]
Death Penalty Habeas Corpus		201	5685	12.89
Environmental Matters		1198	2113	4.79
Civil RICO		730	2108	4.78
Patent		2455	2080	4.72
	Drug Offense -- Continuing Crim Enterprise	36	1921	4.36
Civil Rights -- Voting		209	1702	3.86
Antitrust		751	1520	3.45
Freedom of Information Act		272	1351	3.06
Copyright and Trademark		5144	935	2.12
SEC, CFTC, Similar Enfrcmt Actn (US Plaintiff)		274	916	2.08
	Murder, Manslaughter, Homicide	281	876	1.99
SEC, Commodts, Stkhldr Suits (non-US Plaintiff)		2905	849	1.93
Civil Rights -- Other		18462	845	1.92
	All Extortion, Threats, and RICO	657	832	1.89
Other Fraud		1555	748	1.70
Civil Rights -- Employment		20079	735	1.67
Assault, Libel, and Slander		645	650	1.47
Insurance Contracts		7459	622	1.41
Medical Malpractice		1309	616	1.40
	Aggravated or Felonious Assault, Kidnapping	401	589	1.34

[6] The scaled weight of a case type is computed by dividing the raw weight for the case type by the median raw weight value for all standard civil and criminal case types. The median raw weight value is 441. Standard case types exclude Supervised Release and Probation Revocation Hearings.

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Figure 4: Final Case-Weight Values Presented to the Subcommittee for Approval (continued)

Federal Judicial Center — Revised District Court Case Weights

Federal Tax Suits		1018	570	1.29
Other Contract Actions		16849	537	1.22
Banking and Finance		1316	518	1.17
Other Property Actions (real or personal)		2300	517	1.17
	Drug Offense -- Manufacture	628	493	1.12
	Sexual Offenses and Pornography	968	484	1.10
	Espionage and Terrorism	12	477	1.08
	Drug Offense -- Sell or Distribute	10339	471	1.07
All Other Labor		5782	452	1.02
	Firearms	5470	442	1.00
	All Other Felonies	2194	441	1.00
All Other Actions		12008	438	0.99
	All Fraud	7038	426	0.97
Personal Injury (excluding Admiralty)		12026	399	0.90
Admiralty		4103	386	0.88
	Larceny and Theft	1449	386	0.87[7]
	Drug Offense -- Possession	1186	380	0.86
Interstate Commerce		603	372	0.84
ERISA		10206	369	0.84
Federal Employer's Liability		970	336	0.76
Land Condemnation		615	335	0.76
Prisoner Civil Rights / Prison Conditions (Federal)		1020	332	0.75
	Embezzlement, Forgery, and Counterfeiting	1892	329	0.75
Bankruptcy Withdrawal		970	325	0.74
	Robbery and Burglary	1245	312	0.71
Prisoner Civil Rights / Prison Conditions (State)		21838	293	0.67
Social Security		16432	277	0.63

[7] Admiralty and Larceny / Theft case types appear to have the same raw weight but different scaled weights. This anomaly is due to the rounding of the raw weight values for purposes of presentation. The scaled weight values are correct.

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Figure 4: Final Case-Weight Values Presented to the Subcommittee for Approval (continued)

Federal Judicial Center

Revised District Court Case Weights

	Drug Offense -- Import / Export	2473	270	0.61
Product Liability (excluding Admiralty)		12740	267	0.61
	Alien Smuggling	1146	252	0.57
Bankruptcy Appeal		2579	251	0.57
§2254 Habeas Corpus		22162	240	0.54
Mandamus		1236	215	0.49
	Other Immigration	10091	208	0.47
Deportation / Immigration		332	193	0.44
Forfeiture and Penalty		1898	184	0.42
Foreclosure		5240	142	0.32
§2255 Habeas Corpus		6743	141	0.32
	All Misdemeanor and Petty Offenses	3857	81	0.18
Asbestos		13402	54	0.12
Overpayment and Recovery		7630	44	0.10
	Supervised Release and Probation -- Evidentiary Revocation Hearing		96	0.22
	Supervised Release and Probation – Non-Evidentiary Revocation Hearing		60	0.14

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Table 3 compared weighted caseloads calculated under the 1993 and the 2004 weighting systems, listing the per-judgeship weighted filings for both individual districts and the nation as a whole for calendar years 2001–2003. The total weighted caseload on the national level changed little under the new weights, registering a 1%, 4%, and 5% decrease in 2001, 2002, and 2003, respectively. When weights were applied to the caseloads of individual courts, the difference for the majority of courts was modest. In more than two-thirds of the courts, the weighted caseload changed by 10% or less in either direction each year. For a number of courts, however, the weighted caseload under the new system was a significant departure (i.e., more than 20%) from the weighted caseload calculated with 1993 weights. The magnitude and direction of the difference depended on the number and type of cases filed in the court.

At the Subcommittee meeting, we distributed a companion table to Table 3. This table ranked the courts on the basis of their 2003 weighted caseloads as computed using the new and 1993 case weights. As expected, the weighted caseload values of individual courts differed under the two weighting systems, but differences in an individual court's rank order tended to be small.

Table 4 summarized how event frequencies and time estimates combined to form the final raw weight of each case type.

Case-Weight Approval

The Subcommittee approved the weights at its June 15, 2004, meeting and adopted them for immediate use in developing their preliminary recommendations for judgeship requests as part of the 2005 biennial judgeship survey. The Subcommittee did not change the criterion used to evaluate the per-judge weighted caseload figures for courts because (1) the range of relative weights in the new system was similar to the range of the 1993 weights it replaced, and (2) the new weights had minimal impact on the national weighted caseload.

Acting on a recommendation by the Subcommittee, the Committee on Judicial Resources approved the new case weights at its biannual meeting on June 17, 2004. The Committee additionally approved the immediate use of the weights in developing judgeship recommendations.

Information for the Courts: Frequently Asked Questions and National Rankings

The Subcommittee asked us to prepare summary information about the new case weights for it to send the courts. Members asked for the main document to be formatted as a list of Frequently Asked Questions (FAQ), and made recommendations, supplemented by recommendations from the Judicial Resources Committee, on topics the document should cover.

We developed the FAQ, which reported on how the weights were developed, how they compared to previous weights, what effect the weights were likely to have on a court's weighted caseload, and how the Subcommittee uses them. We included a companion table that compared the new weights to the old weights for individual case types, and a second table that used AO caseload information to rank order the weighted caseload per judgeship for courts, under the new and old case-weight systems.

The Subcommittee chair and the Judge Advisory Group reviewed the materials, and after minor modifications, the chair sent the documents to all chief district judges with a cover memo announcing the adoption of the new weights.

The memo and its attachments appear at Appendix Z. Appendix Z additionally includes a copy of an article announcing adoption of the new case weights that appeared in the *Third Branch* (August 2004).

List of Appendix Items

These items and the electronic version of this report are available at the Federal Judicial Center's internet website (http://www.fjc.gov) or, for readers within the courts, at the FJC's intranet site (http://cwn.fjc.dcn).

The Federal Judicial Center

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The Federal Judicial Center is the research and education agency of the federal judicial system. It was established by Congress in 1967 (28 U.S.C. §§ 620–629), on the recommendation of the Judicial Conference of the United States.

By statute, the Chief Justice of the United States chairs the Center's Board, which also includes the director of the Administrative Office of the U.S. Courts and seven judges elected by the Judicial Conference.

The organization of the Center reflects its primary statutory mandates. The Education Division plans and produces education and training programs for judges and court staff, including satellite broadcasts, video programs, publications, curriculum packages for in-court training, and Web-based programs and resources. The Research Division examines and evaluates current and alternative federal court practices and policies. This research assists Judicial Conference committees, who request most Center research, in developing policy recommendations. The Center's research also contributes substantially to its educational programs. The two divisions work closely with two units of the Director's Office—the Systems Innovations & Development Office and Communications Policy & Design Office—in using print, broadcast, and on-line media to deliver education and training and to disseminate the results of Center research. The Federal Judicial History Office helps courts and others study and preserve federal judicial history. The International Judicial Relations Office provides information to judicial and legal officials from foreign countries and assesses how to inform federal judicial personnel of developments in international law and other court systems that may affect their work.