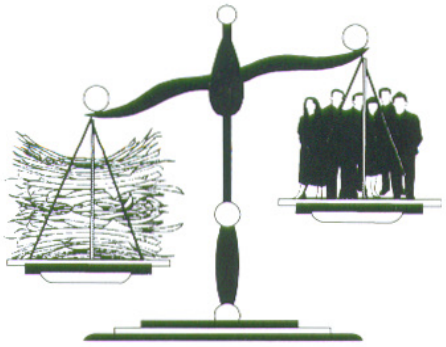


Assessing the Need for Judges and Court Support Staff

National Center for State Courts
State Justice Institute

SJI State Justice Institute

Guideline 10 *Simulation can be used in concert with other criteria to determine how to make the best use of existing judges and court support staff.*

USING SIMULATION TO ASSESS THE NEED FOR COURT SUPPORT STAFF

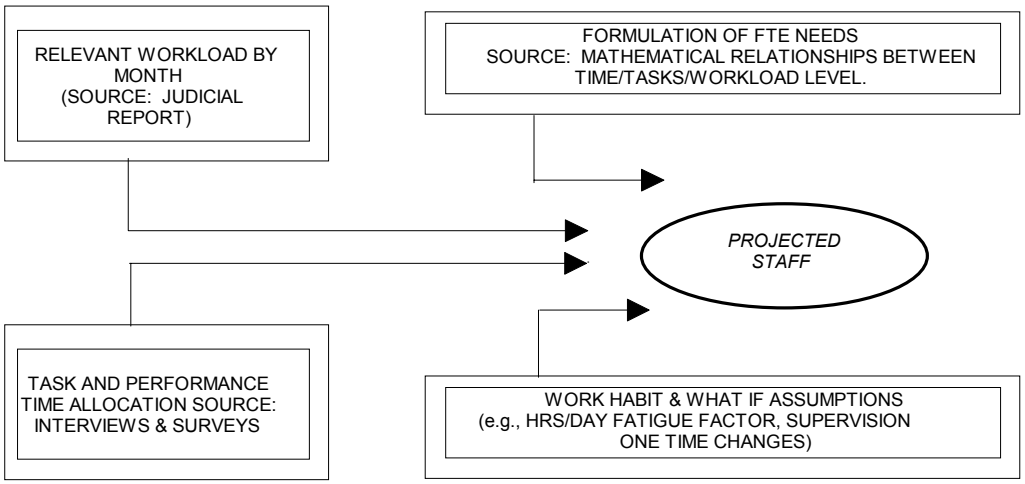
The Municipal Courts of Riverside County, initiated a service delivery improvement project in 1992. One result of this study of Riverside County courts was a computer-based management tool to analyze case processing and determine the need for court support staff. The Resource Allocation Model (RAM) uses specific data on case type and volume, organizational structure, and employee work habits to develop staffing standards. The need for court support staff can be generated automatically as monthly data are entered.

The first version of the model became operational in Riverside Municipal Court in October of 1992. Since that time, the Superior and Municipal Courts of Riverside have consolidated to form a unified court. A new version of the model reflecting this organizational change has been developed. A diagram of the basic model structure is shown in Figure D.

An Overview of the Resource Allocation Model

At a minimum, the model requires a basic set of initial data as well as workload data that is updated monthly. The initial data required includes a list of tasks to be performed and time standards for completing those tasks in six basic case processing areas: new filings, pre-judgment, calendaring, courtroom, post-judgment, and judgment. In Riverside County, tasks performed by staff in each of the divisions were identified and recorded. For two weeks, employees kept a log of the frequency of each task and the time necessary to complete each. From this data, a standard was set for each task in every division. The set of activities used to process traffic cases, for example, and the average amount of time taken to complete each task are displayed in Table 22.

Figure D: Staff Requirement Analysis in the Riverside Municipal Court



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Twenty-five months of historical caseload data was used to initialize the model. Caseload data must be updated monthly to keep the model current. For example, the traffic component of the model requires the addition of only 22 numbers that correspond exactly with the data reported monthly to the state administrative office of courts. Drawing on readily available caseload data is a major strength of this model.

Information on caseload and the time needed by staff to handle each type of case is factored together in the model to produce an estimate of court support staffing need. As with weighted caseload, a staff day and year must be established that clarify the amount of time available to accomplish the work of the court.

One of the distinguishing features of the Riverside plan is a commitment to make it serviceable to division supervisors. The model software is divided into three main menus: the "set-up," "projections," and "what-if" options. The "set-up" option is where historical data are entered, projection methods selected, staff projection formulas defined, and assumptions about staff work habits identified. The "projections" option is where projections of staff need and graphical displays of information are generated. The "what if" option allows the user to test various changes to workload and case processing procedures and to measure this effect on staff resource needs. The model will be available on the local and divisional levels at personal computer stations. Court management has given line supervisors the authority to redistribute staff based upon analysis from the model, and performance reviews of the division will be based upon model output.

Table 22: Average Completion Times for Traffic Cases in Riverside County

DESCRIPTION	BLYTHE	CORONA	INDIO	PALM SPRINGS	RIVERSIDE
NEW FILING: RECEIPT AND PROCESSING					
1. CHECK TICKETS FOR CORRECTIONS	0.73	0.40	0.61	0.71	0.25
2. COUNT TICKETS AND MISDEMEANORS	—	0.04	0.30	0.40	—
3. SORT TICKETS/INPUT IN COMPUTER	2.50	2.40	2.30	4.30	2.70
4. FILE TICKETS BY DATE OF VIOLATION	0.34	0.23	0.71	0.65	0.22
5. REJECTS	3.50	1.70	1.30	2.00	2.50
GENERAL MAIL ACTIVITIES					
1. MONEY DESK ACTIVITIES (PER DAY)	24.00	N/A	74.00	22.00	105.00
2. NOT GUILTY CLAIMS	6.10	6.40	9.50	7.00	3.60
3. TRAFFIC SCHOOL COMPLETION	8.10	5.70	6.50	8.00	9.50
4. INFRACTION PAYMENT BY MAIL	1.30	2.00	2.40	3.40	1.40
5. CORRESP. & COMMUNICATIONS (PER DAY)	34.00	38.00	56.00	28.00	90.00
6. BAIL NOTICES	N/A	0.10	N/A	N/A	N/A
7. GENERAL MAIL (PER DAY)	56.00	62.00	90.00	42.00	170.00
GENERAL COUNTER ACTIVITIES					
1. GUILTY PLEA TO PAY	6.10	3.50	4.20	1.80	2.40
2. FIX-IT INFRACTIONS	6.10	3.20	3.40	6.20	2.60
3. REQUEST FOR ABSTRACT	7.80	6.30	6.70	2.80	6.10
4. DROP BOX (PER DAY)	N/A	N/A	N/A	N/A	12.00
5. COURT EXTENSIONS	2.70	2.70	2.90	3.00	1.80
COURT WALK-IN					
1. PRE-COURT ACTIVITIES	5.80	5.00	5.10	7.60	8.30
2. POST-COURT ACTIVITIES	5.70	5.70	6.40	6.20	3.50
TRAFFIC SCHOOL					
1. TRAFFIC SCHOOL REQUESTS	6.80	5.70	4.40	2.50	3.30
2. TRAFFIC SCHOOL COMPLETION	4.90	3.20	3.80	3.00	1.60
COURT TRIAL (BEFORE COURT)					
1. COURT TRIAL INITIAL SETUP (SIGN UP)	6.00	5.50	6.60	3.80	4.60
2. COURT TRIAL SETUP (PREPARE PAPER WORK)	N/A	N/A	N/A	N/A	N/A
3. CALENDARING	3.20	4.00	5.60	6.80	4.90

A comprehensive training program is being developed for all court supervisors, and the model will not be fully implemented until this training phase is completed. Arguably, because they provide direct calculation of resource requirements, deterministic models, such as RAM, may have a slight advantage over queuing models as a working tool for line supervisors.

Assessment of the Model

RAM is a "deterministic" model, similar to the JUSSIM and CJISSM models described earlier. It uses mathematical algorithms to convert caseload measures into estimates of workload and directly calculates staff need as a model *output.* This contrasts with the queuing simulation models, such as those under development in California and Washington, in which judicial resource levels are indirectly determined from the model *input.*

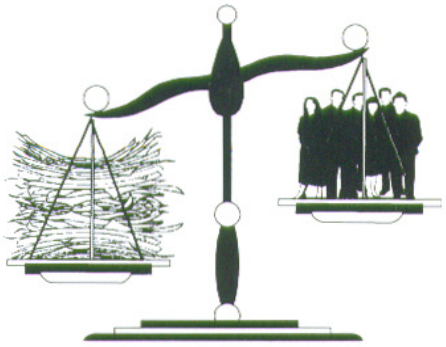
RAM also differs from queuing models in its use of aggregate data, typically represented by arithmetic means, in estimating staffing needs. This effectively limits analysis from the model to "average" cases. In contrast, queuing models use frequency distributions when simulating case processing that allows for the analysis of cases both more and less complex than the average. The cost of

this additional level of analysis is in the data. All other things being equal, the queuing model will have more data requirements than the deterministic model.

Like other simulation models, RAM's advantage for determining resource needs over static "status quo" methods, such as weighted caseload systems, lies in the user's ability to pose "what if" scenarios concerning court operations and resource levels. This allows court managers using the model to empirically evaluate resource requirements while "testing" case processing innovations for effectiveness and efficiency. For example, by changing model parameters for a one-time "what if" query, court managers can use the model to simulate changes in staff duties and then analyze how those changes impact the need for staff resources in a particular department or across an entire court.

In summary, the Resource Allocation Model is not as data-intensive as the queuing simulation models, but does allow resource assessments to be made in tandem with an evaluation of work processes—a distinct advantage over static resource methods. Like most simulation models, the data requirements are not small, but once an initial study of case processing is completed, the data required to keep the model current (given the initial model assumptions) are routinely collected by monthly workload statistics. RAM has the capacity to examine each operating department (civil, criminal, traffic, and juvenile) separately, and so can be implemented in modular fashion.

The real test of simulation models is whether they are actually used to make decisions on resources and court operations in the courts. By requiring model-based analysis from line supervisors and court managers for staff changes and division performance reviews, the Riverside RAM model promises to be one model that will be used as an integral part of empirical court management.



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