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TRIP MEMORANDUM

INTRODUCTION OF  
COMPUTERIZED COURT  
REPORTING IN THE GAMBIA

SUBMITTED TO

USAID/BANJUL

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SUBMITTED BY

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**TRIP MEMORANDUM:  
INTRODUCTION OF COMPUTERIZED COURT REPORTING  
INTO THE SUPREME COURT OF THE GAMBIA**

This Trip Memorandum was prepared by Randall A. Czerenda and Alan P. Gross in response to Purchase Order Number 635-0237-3-00-4077 issued by USAID/Banjul. This action was executed during 6-13 June 1994 as a follow-on activity involving the introduction of modern court reporting skills and technologies into the Supreme Court of The Gambia. Accordingly, this document is organized into seven sections that address specific objectives stated in the subject Purchase Order.

**I. EVALUATION OF THE PROGRAM AT THE GAMBIA TECHNICAL TRAINING INSTITUTE (GTTI)**

- A. Initially, 16 persons were enrolled into this program. A graduation rate of 50 percent is acceptable in similar schools in the United States. GTTI's dropout has been four students, one of whom had to leave because of health. This equates to a projected graduation rate of 75 percent. The students will reach 160 words per minute at staggered times, which is normal.
- B. The GTTI teachers are highly qualified in all aspects of the training program except the software in the computerized transcription. Their knowledge of the theory and methods of instruction are more than adequate.
- C. The target speed for graduation is 160 words per minute (WPM). A practical training experience was also built into the curriculum. It is expected that a student will be able to achieve the 160 WPM goal in twelve to fourteen months of training. At this evaluation, there are five students at the 150-160 WPM mark. The slowest person is challenging the 130 WPM levels. The five top students have completed the practicum (attachment) and the remaining students are now experiencing their attachments. The students' writing skills exceed expectations, but the editing, or transcription, skills need more work.
- D. Recommendations for this group of students are found section VI.

**II. GUIDE TO ALLOW THE IN-COUNTRY ASSESSMENT OF STUDENTS**

- A. The present monitoring and assessment methods by the teachers at GTTI have been evaluated by this writer on both previous visits and discussions with the teachers in extensive correspondence when this writer is out of country. Evaluation is two-fold:
  - 1. Objective: To demonstrate a writing speed at 160 WPM for three minutes and to be able to accurately (with 95 percent accuracy) transcribe this writing.
    - a) 95 percent accuracy is the generally accepted level in English-language environments.
    - b) The student must pass either two examinations at the same speed or have passed one speed level and then pass the speed just above it to confirm his ability to write at a certain speed. Example 1: The candidate passes two takes at 150 WPM. This confirms to the instructor that he can accurately write at 150 WPM and should now go on to work on the 160 segment. Example 2: The student passes one 150 WPM and one 160 WPM exam. The student thereby confirms the 150 WPM mastery by passing the 160 WPM and may now concentrate on passing another 160 WPM test.
  - 2. Subjective: To demonstrate an ability to report the proceedings of the Supreme Court and prepare a transcription of the proceedings.
    - a) Each student is required in the training to do a practicum or attachment. Five students have completed this task to date and this writer has evaluated their work as well as the work of two of the students now involved in their attachment. It is expected that the seven students yet to finish their attachment will send me examples of their work nearer to the end of their attachment.

- b) This part of the evaluation is to measure the quality of the end product, the transcript. It is this writer's belief that the writing skills, as stated earlier, exceed expectations; however, the editing skills do not meet the standards necessary to meet the expectations of the end user, the judges and lawyers.
- c) The major problems in this part of the evaluation are that the students are having to work in a vacuum, since there are no mentors in place in the court system at present. Keyboarding skills are not the problem, but English grammar weakness is; sophisticated mastery of the software will only result after the students have had more experience with it.
- d) Recommendations for this group and future groups of students are found in section VI.

### III. AWARDING OF INTERNATIONALLY RECOGNIZED CERTIFICATES IN COURT REPORTING

- A. Upon graduation, each student of GTTI will be offered a one-year complimentary membership in the International Guild of Professional Reporters.
- B. The Guild offers three certificates in the English language:
  - 1. At 160 WPM.
  - 2. At 190 WPM.
  - 3. At 225 WPM.
- C. If after membership a person is able to demonstrate competency of writing and transcribing timed material of three minutes or longer with at least 95% accuracy in any of the above speeds, they will be entitled to certification at that speed.
  - 1. Reliance on the test results is obtained from the candidate either taking the examination at international conferences of the Guild or its member units, or when given by recognized training programs.
  - 2. This writer is on the Board of Directors of the Guild and intends to recommend GTTI to be a certified training site for the region of West Africa in the English language.

### IV. RECRUITMENT OF THE NEXT CLASS OF STUDENTS AND RECOMMENDATION OF GTTI AS A REGIONAL TRAINING INSTITUTE

- A. GTTI must take the lead, if it desires to do so, and declare itself to be a regional training center. This writer's recommendation to the International Guild of Professional Reporters will be to certify GTTI as a recognized training site for the West African region in the English language.
- B. GTTI at this moment finds its most likely future candidates within the Government of the Gambia. To recruit students from outside The Gambia, GTTI should begin a campaign to familiarize the region of the opportunities available in the court reporter training in The Gambia. This writer has referred the attention of the Parliaments of Sierre Leone and Cameroon to GTTI, since each of these countries have expressed an interest in having trained reporters working in their institutions.
- C. Recommendations for the Government of the Gambia regarding another class of court reporters are found in section VI.

### V. IMPLEMENTATION PLAN FOR THE INTRODUCTION OF THE COURT REPORTING PROGRAM INTO THE SUPREME COURT OF THE GAMBIA

- A. An attachment of the students to the Supreme Court has been built into the training program when the students reach the speed of 140 WPM.
  - 1. The attachment allows the student to have an introduction to the work of the courts before the end of the training, thereby allowing the training program the opportunity to remediate any problems the student might encounter during this transition phase. Additionally, the students begin to visualize themselves as a team member during this role-playing phase of the training.

2. The judiciary and management of the Supreme Court get the opportunity during this attachment to see each student performing in a "mock" situation to begin considering how best to use this person when he/she comes on board full time.
- B. Because this is an introduction of court reporting where no court reporter existed before, mentors do not exist. In the future, the working reporters will act as mentors and assist the trainee in an understanding of his upcoming role in the court system. This matter is also addressed in the recommendations section of this report.

## VI. RECOMMENDATIONS

### A. EVALUATION OF THE PROGRAM AT GTTI AND THE SYSTEM TO MONITOR STUDENTS' PROGRESS

1. Because the students will be achieving their 160 WPM goal at a staggered time, and because the editing skills need continued improvement, it is recommended that:
  - a) No person be placed into the Supreme Court until that person has reached the goal of writing 160 WPM and can show that they are capable of producing an adequate transcription of the proceedings of the Court.
  - b) Those students who have not yet reached the goal of 160 WPM continue their daily training at GTTI until they do reach the required speed. As the advanced students leave the program, these slower students will get a more intensive experience with the teachers and their progress should be accelerated. All students are projected to complete their speed training to 160 WPM by no later than November 1994.
  - c) During the summer months, the civil part of the Supreme Court goes into recess. The qualified persons will be able to work in the criminal parts of the court. In addition to this criminal part coverage, it is suggested that the new reporters also take responsibility for producing the transcripts of matters which are backlogged and awaiting transcription. Because the handwritten minutes are sometimes difficult to read, it is suggested that a clerk be assigned to read these minutes aloud for the court reporter to write down and then make a transcript thereof.
    - (1) Beginning to cover the criminal courts will, of course, give the new reporters the important experience of recording and transcribing live matters. This will be a great benefit to them when the civil courts return from recess in November.
    - (2) The transcription of the backlogged cases will provide a service to the court, obviously. In addition, it will help the new reporters to understand the format required by the court for the production of these appeal transcripts and the commonly used language of Supreme Court matters.
    - (3) Editing skills will be practiced in the production of these backlogged transcripts. This is a very important benefit of this exercise to the reporters. They will need the opportunity to experiment with the software and its capabilities under as non-stressful an environment as possible in order to develop the skills necessary to handle the expected workload.
2. The professional cadre for the court reporters has been set at Grades VII, VIII and IX. It has been this writer's prior recommendation that the 160 WPM be the entry-level speed and be graded at the lowest grade, or Grade VII. The recommendation for the future is as follows:
  - a) Future training programs may continue to graduate students at the 160 WPM speed. However, these graduates should be eligible at a Grade VII to enter the Magistrate's Court, Muslim Court and other non-Supreme Court positions.

- b) Future Supreme Court appointments should be made by those persons who achieve the 190 WPM certificate. Grade VIII may be awarded to those persons who have advanced to this speed.
- c) Grade IX should be reserved for those special individuals who are able to advance their skills to the 225 WPM speeds. These persons will be extremely valuable to the courts because they will be able to report the most difficult cases while at the same time giving the highest degree of reassurance to the Supreme Court Justices that the record is being accurately reported. If the position of Gambian Parliament Reporter is considered, it is recommended that persons from the Grade IX category be considered for this position.

## B. GTTI'S CONTINUING AND FUTURE TRAINING PROGRAMS

1. Present students should have continuing training on either a day release or an evening program.
  - a) This continuing training program should be set up in a laboratory format. A room should be set aside for this sole purpose with tape recorders and headphones in enough supply to accommodate the number of persons enrolled. This writer received a 100% interest from the present students regarding attending such a program. Speed tapes from 180 WPM to 240 WPM should be stocked in this lab with a good-quality dubbing machine available for the students to make copies of these tapes for their own use. These speed tapes are commercially available from the National Court Reporters Association in Vienna, Virginia.
  - b) The World Bank is funding a new library within the GTTI compound. Rather than requesting money for books from the World Bank for the court reporting program, it is recommended that a request be made for the above-mentioned speed tapes.
  - c) A teacher would need to be present to monitor this lab experience and to be available for testing. Classroom training is not necessary. Since each person will now be progressing at his own pace, and since a motivation for continued training is a higher grade, a traditional classroom program is not necessary.
  - d) It is recommended that GTTI make this program a permanent fixture of its court reporting curriculum so as to be in place for this present group and available for all future graduates.
  - e) In this way, all students should have gained adequate training, both speed and editing, so that we can reasonably expect all twelve persons to be functional in the Supreme Court by January 1995.
2. Future training programs.
  - a) All parties involved have expressed to this writer that a future supply of trained court reporters is necessary, since:
    - (1) They will be available as replacements in the event present court reporters leave service or are transferred to another area. The possibility exists, of course, that some of this number will be promoted to a Grade IX and then be on a rotational service from the Supreme Court to Commissions of Inquiry, the Parliament, etc. It is also possible that one or two reporters will not evolve to grade VIII at a pace sufficient to meet the growing demands expected as the role of the Supreme Court Reporter expands. In that event, it would be recommended to transfer that individual to a less demanding Grade VII position.
    - (2) Other government uses of court reporting have been identified that would be very helpful in moving both civil and criminal cases along;

- namely, to the Magistrate's Court and attached to the major police stations. This would be a Grade VII position.
- (a) The work at the Magistrate's Court would be similar to that in the Supreme Court.
  - (b) The work at the police stations would be that of taking statements of witnesses and accused persons and preparing transcripts of the same. The benefit to the police department is obvious; the benefit to the court is that it provides a document which is readable and reliable.
- (3) There is every reason to believe that a private, commercial demand will develop in The Gambia for the services of a highly skilled stenographic writer. Anticipated requests for this service would be from hotels, convention centers, bank and multi-national companies and attorneys, both local and visiting, who would wish to take a verbatim deposition.
- b) It is recommended that the new training program begin at GTTI sometime after December 1994. This would allow GTTI the time necessary to devote to the final stages of the present group's training, to set up the lab and the advanced speed section, and it will give the government time to select its next group of candidates.
- (1) As the present students enter the court system, their presence will generate interest in what it is they are doing from potential recruits.
  - (2) Ten persons is recommended from government to enter the next training program. Of the ten, six to eight persons would be expected to graduate.
    - (a) This writer recommends ten persons because of his concern for the budgetary constraints involved in absorbing a greater number of persons into the system. If budget is not a consideration, another 16 to 20 persons could be recruited.
    - (b) A contingent of ten persons from government would allow GTTI the opportunity to fill out the class with private students. If those private students are from The Gambia and finish the requirements of the training program, they could be considered by government for entry into the court reporting cadre.
  - (3) The equipment presently in place at GTTI was intended to be transferred to the new Supreme Court building at the end of the training. It is, therefore, recommended that:
    - (a) Those students who reach 160 WPM be allowed to take a Stentura (which is the electrified and computerized writing machine) to the court. A minimum of four Stenturas is necessary to cover the four courts that are sitting at any one time. The remaining Stenturas would stay at GTTI for the use of the continuing students.
    - (b) One of the computers and printers would be moved to the Court House for the use of the reporters there.
    - (c) At least four more computers should be purchased with Premier Power Lite software, one of which would go to GTTI and three of which would go to the Supreme Court. In the initial recommendation, this writer suggested that for twelve court reporters, four computer systems with two laser printers and two dot matrix printers would be necessary. That is still his recommendation.

- (d) All nine of the Stentura 8000's should be transferred to the Supreme Court by January 1995. The manual machines would stay at GTTI. Ten Stentura 500's should be purchased and placed with GTTI before the time the students begin their computer training. The model 500 has recently come out and has all of the capabilities of the 8000 in a less sophisticated version and at approximately one-half the cost of the 8000.
- (e) All equipment, except the manual writing machines, would be transferred to the court system at the conclusion of the second training program.

C. ADDITIONAL RECOMMENDATIONS

1. Office space.

- a) For the maximum benefit of the court system, it is recommended that the court reporters be grouped and housed into one area. This will allow convenient access to the equipment and supplies. It will also give each person the opportunity to better support the other reporters. An example would be that if, while printing a transcript, someone is called to go to court, another reporter could easily watch the printer while that person is in court.
- b) Because of the nature of the work a court reporter does, and because interruptions to go to court while working on a project is common, it is necessary that the court reporter have a work area that is private and not easily accessible by the public.
- c) Optimally, each reporter should have his own work space. It is recommended that two computers be grouped together on one side of the office suite and the other two computers grouped on the other. A laser and a dot matrix printer, with a switch box, can be hooked up to each group of two computer systems. Each reporter would be assigned to a computer with four reporters on each system.

2. Central management.

- a) It is recommended that a central person be identified as having the responsibility for supervising and managing the court reporters. This person would have day-to-day responsibility for assigning court reporters to specific courts, supervising the production and distribution of transcripts, and for collating data for statistical analysis regarding the impact of court reporting on the system as a whole.
- b) In many jurisdictions, the transcripts of court reporters become a revenue producer for the court system. It is recommended that the government consider such a system for the courts of The Gambia. A fee may be charged on a per-page basis for requests from private persons (generally attorneys) for the production of transcripts. This management person would be responsible for receiving such requests for transcripts, supervising the transcript's production and collecting the fees therefor.
- c) As regards private sector requests for court reporting services, the manager would be responsible for receiving requests for the private services of a court reporter and for the assignment of a person to perform such services. It is recommended that the selection process of a court reporter to perform private sector work be based on:
  - (1) Availability of persons. This is based on the competence demanded to meet the request in terms of writing skills as well as staffing requirements in the court.
  - (2) Awarding of these assignments by merit, keeping in mind such things as skill levels and fairness of assignments.
- d) Revenue from private work.

- (1) Because the court reporters will become highly skilled individuals, there might be the temptation to leave government service and enter the private sector for more money. Allowing the reporters to take private work may be one way of keeping management in control of the distribution of work as well as allowing the reporters to benefit from such work without leaving service.
- (2) If, over the course of several years, enough private sector business develops, a private agency could be formed to service this demand.
- e) Assignment of court reporting services to other than Supreme Court.
  - (1) There are several situations which may arise where the court system will feel it advisable to assign a court reporter to the Magistrate's Court to cover some special matter, for which a transcript will need to be available in a short period of time. It is recommended that requests for such service and the assignment and supervision of personnel to meet such requests be supervised by this manager.
  - (2) If there is a slow period in the work of the Supreme Court, the manager should have the option to assign individuals to work on transcription of backlogged appeals from either the Supreme Court or the Magistrate's Court or to assign court reporting services directly to the Magistrate's Court for a normal session.
  - (3) If persons qualify for advancement through the court reporter cadre by achieving mastery of the higher speeds, the management person should make such recommendation for such promotion.
  - (4) Conversely, if enough persons, over a period of time, reach the Grades VIII and IX sufficient to meet the need of the Supreme Court, the management person should have the authority to move any remaining grade VII persons to the Magistrate's Court positions.
3. A January seminar. It is recommended that a committee of persons be appointed for the evaluation of the court reporting program. This committee shall have a life for at the least the next six months. The committee should be composed of one Justice, one management person, one person from the Ministry, one lawyer, one educator and one court reporter.
  - a) The goals of the committee would include but not be limited to:
    - (1) Evaluating the orderly integration into the Supreme Court of the persons and technology of the new court reporting program.
    - (2) Analysis of the quality and completeness of the transcripts being produced by the court reporters.
    - (3) Resolution of problems that may come up during the transition phase of July to December 1994.
  - b) During the first week of January, preferably on the 4th and 5th of January, 1995, since the Supreme Court is in recess during this week, a seminar be planned whereby the Supreme Court Justices, the management personnel of the court system, the ministry, the attorneys, the educators and the court reporters would come together to discuss any problems or issues that exist at that time and possible solutions for them. It is recommended that the consultant be brought back to prepare for and facilitate this seminar. Outcomes from such a seminar would be:
    - (1) Identification of any problems which have come into the system and have not been resolved in the six-month period passed.
    - (2) Resolutions jointly concluded for those issues which can be resolved and plans for remediating those which cannot be immediately resolved.
    - (3) Implementing an in-house mechanism for setting system-wide goals for use of available manpower and technology.

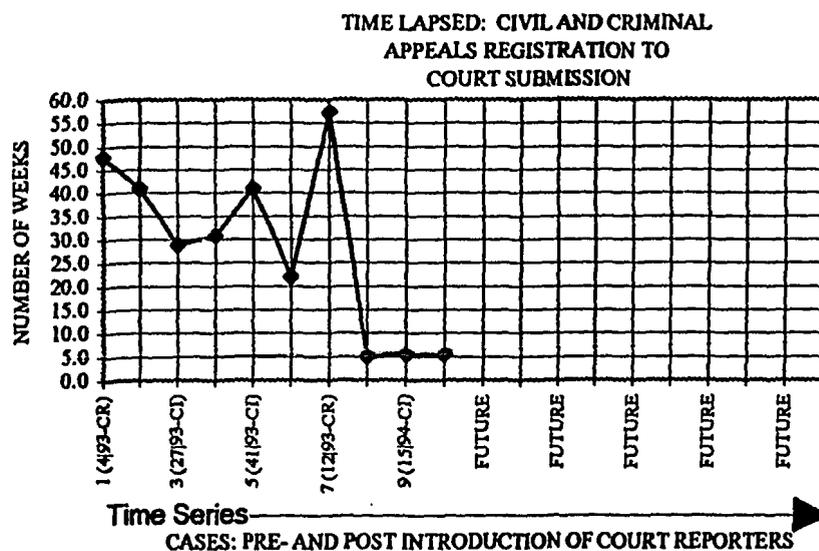
4. Estimated budgets for the first year (January to December 1995) of the Supreme Court and for a training program at GTTI for the ten students supplied by government are attached as exhibits to this report.

VII. DEVELOP A MONITORING SYSTEM FOR MEASURING THE IMPACT OF THE NEW TECHNOLOGY ON THE EFFICIENCY OF THE SUPREME COURT

A. Multiple Baseline Single System Design

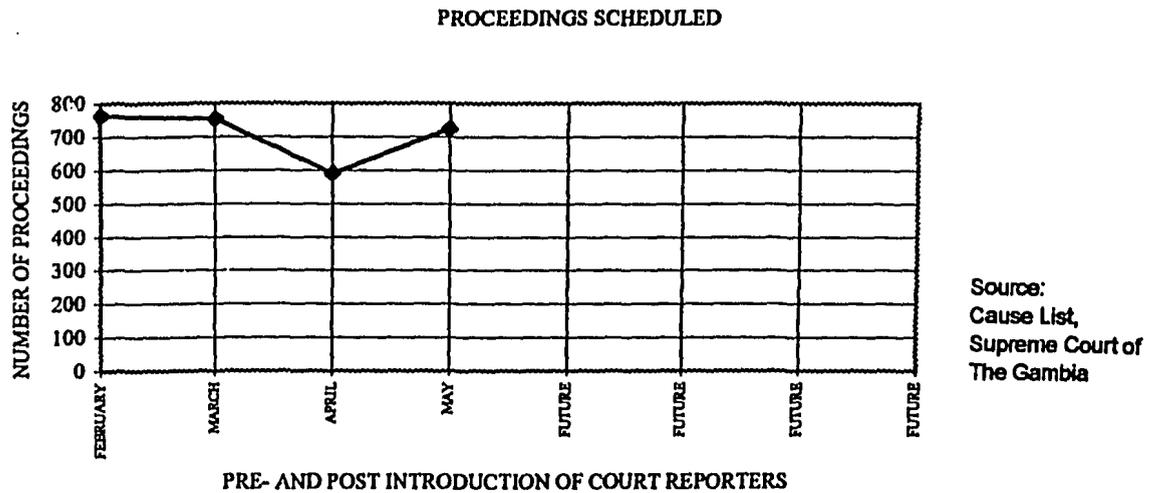
1. The recommended approach for this monitoring system is a short-term time series analysis since change --if any occurs-- is to be observable over time.
2. Single system designs are instruments with which change in specific variables can be objectively monitored and evaluated within a relatively short period of time.
3. Monitored change can be analyzed for statistical significance and attribute. Within this environment, a single system design time series model has been developed.
4. A multiple baseline approach will be utilized because multiple variables are to be monitored. This approach to measuring change will provide an inference of attribute and will show a quasi-statistical correlation between the introduction of computerized court reporting and whatever change in variables can be observed and measured.
5. Four variables have been selected for monitoring once computerized court reporting is introduced. This selection of variables, based on the availability of reliable data obtained from the Supreme Court and Ministry of Justice, includes:
  - a) Time lapsed from when cases are registered for appeal to when cases are transferred to the Appeals Court (see figure 1). This variable is currently at risk and it is considered an area where the new technology will potentially have an early measurable impact. Time currently required for the preparation of appeal case files is considered excessive and is viewed as impeding the judicial process.
    - (1) In this instance, only ten cases reflecting the number of weeks required to ready case files for submission to the Appeals Court could be documented. The last three cases (numbers 7, 8, and 9) are considered anomalies and future data points are likely to appear in the upper ranges (as with cases 1 through 6).

Figure 1



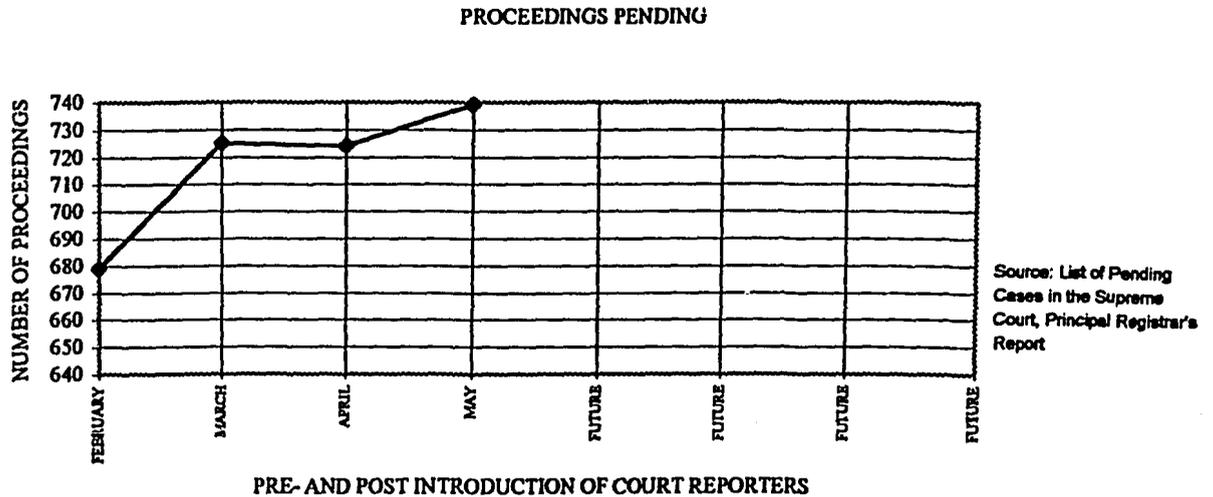
- b) Number of proceedings scheduled (see figure 2). Data reflecting case backlogs in the court system infer capacity scheduling at present. Theoretically, new technology will help to reduce time required for court proceedings<sup>1</sup>, thereby potentially impacting the Court's scheduling capacity.

Figure 2



- c) Number of proceedings pending (see figure 3). Cases pending are considered backlog which could be impacted should modern court reporting reduce the length of time required for court proceedings.

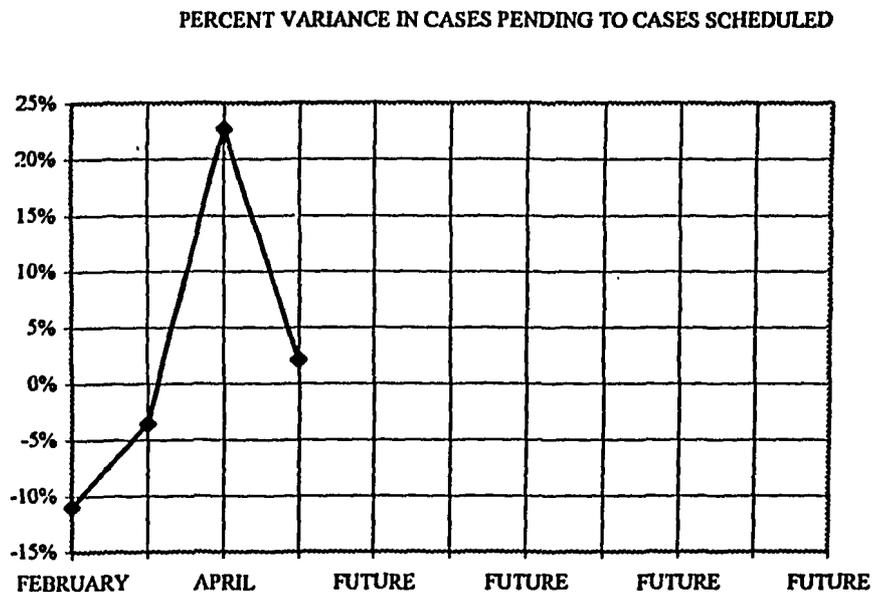
Figure 3



<sup>1</sup> Court proceedings are also referred to as cases and include hearings, summons, rulings, dismissals, and the like.

- d) Percent variance in proceedings pending to proceedings scheduled (see figure 4). Because numbers of proceedings scheduled and pending could also be impacted by numbers of cases filed—especially during times of the year when courts are in recess—changes in variance as a percentage should be a valid measure so long as there is backlog.

Figure 4



B. Re-Establishing Baseline (Control) Data

1. Re-establishing baseline data is characteristic when insufficient time exists to collect minimal control data prior to interventions. Baseline data are required in order to exercise an ability to observe change in the multiple variables identified. In this instance, variables could only be established after determining what data could be extrapolated in order to re-establish baselines.
2. The level of reliable data available for this purpose will allow for a quasi-statistical measure of any observable change that occurs.
3. Data points indicated in figures 1-4 are re-established baselines to be used for this purpose.
4. The absence of a uniform management information system at the Supreme Court is noted. Each case registry (e.g., criminal, civil) is maintained with a separate—not central—sequential numbering system. Unless a case file is available, there is no way of knowing in which registry a case has been entered, or whether the matter is civil or criminal. This condition presents numerous difficulties in data collection and it should be corrected as soon as possible for future evaluation and planning purposes.

C. Testing Baseline Data For Autocorrelation

1. Autocorrelated, or serially dependent data are sources of problematic analyses.
2. Autocorrelated data occur when events in a time series are so related that knowing what happened in the past will predict what will happen in the future.
3. Because errors in prediction and analysis result from autocorrelated data, all re-established baseline data have been tested. These will need to be re-tested, assuming that baseline data will continue to be collected.
4. The following steps were used to test for autocorrelated (rk) baseline data re-established for this activity:
  - a) Baseline scores (S) were recorded.

- b) Scores were summed.
- c) The sum was divided by the number of scores (n) to determine mean score (x).
- d) Using the formula for  $rk^2$ , a numerator and denominator were calculated. (The numerator formula states that a given score minus the mean of that set of scores is multiplied by the next given score minus the mean, adding all such pairs of scores [(S1 - x) X (S2 - x) + (S2 - x) X (S3 - x) + . . .]. The denominator formula takes the scores minus the mean, squares these calculations and sums them [(S1 - x)2 + (S2 - x)2].)
- e) The numerator was divided by the denominator to determine rk. Bartlett's Test<sup>3</sup> was used to determine whether or not these data are autocorrelated. (Data are autocorrelated (or serial dependent) if rk is greater than 2 divided by the square root of the number of scores (n). Data are independent -- not autocorrelated-- if rk is less than 2 divided by the square root of the number of scores (n).)
- f) Tables 1-4 document non-serial dependence --or independence-- of data used to re-establish baselines shown in Figures 1-4. Autocorrelated data can be mathematically transformed for purposes of evaluating change. However, this procedure will not be needed in this instance because baseline data to this point are independent:

TABLE 1 TIME LAPSED: CIVIL AND CRIMINAL APPEALS REGISTRATION TO COURT SUBMISSION (CORRESPONDS TO FIGURE 1)

SCORE (S)		S - x	NUMERATOR CALCULATIONS	DENOMINATOR CALCULATIONS
S1	47.7	19.4	245.08	377.14
S2	40.9	12.6	5.3	159.26
S3	28.7	0.4	1.02	0.18
S4	30.7	2.4	30.54	5.86
S5	40.9	12.6	-79.25	159.26
S6	22	-6.3	-180.99	39.44
S7	57.1	28.8	-670.93	830.59
S8	5	-23.3	532.65	541.96
S9	5.4	-22.9	546.37	523.49
S10	4.4	-23.9	0	570.25
SUM	282.8		429.79	3207.44
MEAN (x)	28.28			
NUMERATOR	429.79			
DENOMINATOR	3,207.44			
rk	0.13			
n	10			
SQUARE ROOT n	3.16			
BARTLETT'S TEST	0.63			
rk < .63				
BASELINE DATA ARE INDEPENDENT				

<sup>2</sup>Bloom, Martin and Fischer, Joel, Evaluating Practice: Guidelines for the Accountable Professional, Prentice-Hall, Englewood Cliffs, New Jersey, 1982, pages 406-409.

<sup>3</sup>Ibid., page 408.

TABLE 2  
 CASES PENDING  
 (CORRESPONDS TO FIGURE 2)

SCORE (S)	VALUE	S - x	NUMERATOR CALCULATIONS	DENOMINATOR CALCULATIONS
S1	679	-37.8	-311.44	1425.06
S2	725	8.3	59.81	68.06
S3	724	7.3	161.31	52.56
S4	739	22.3	0	495.06
SUM	2,867.00		-90.31	2040.75
MEAN (x)	716.75			
NUMERATOR			-90.31	
DENOMINATOR	2,040.75			
rk	-0.04			
n	4			
SQUARE ROOT $\sqrt{n}$	2			
BARTLETT'S TEST I				
rk < 1.00				
BASELINE DATA ARE INDEPENDENT				

TABLE 3  
 CASES SCHEDULED  
 (CORRESPONDS TO FIGURE 3)

SCORE (S)	VALUE	S - x	NUMERATOR CALCULATIONS	DENOMINATOR CALCULATIONS
S1	763	46.3	1630.31	2139.06
S2	752	35.3	-4467.94	1242.56
S3	590	-126.8	-918.94	16065.56
S4	724	7.3	J	52.56
SUM	2,829.00		-3756.56	19499.75
MEAN (x)	707.25			
NUMERATOR			-3,756.56	
DENOMINATOR	19,499.75			
rk	-0.19			
n	4			
SQUARE ROOT $\sqrt{n}$	2			
BARTLETT'S TEST I				
rk < 1.00				
BASELINE DATA ARE INDEPENDENT				

TABLE 4  
 PERCENT VARIANCE IN CASES PENDING TO CASES SCHEDULED  
 (CORRESPONDS TO FIGURE 4)

SCORE (S)	VALUE	S - x	NUMERATOR CALCULATIONS	DENOMINATOR CALCULATIONS
S1	-11%	-0.1	0.01	0.02
S2	-4%	-0.1	-0.01	0
S3	23%	0.2	0	0.04
S4	2%	0	0	0
SUM	0.1		-0.01	0.06
MEAN (x)	0.03			
NUMERATOR			-0.01	
DENOMINATOR	0.06			
rk	-0.09			
n	4			
SQUARE ROOT $\sqrt{n}$	2			
BARTLETT'S TEST I				
rk < 1.00				
BASELINE DATA ARE INDEPENDENT				

- D. Recording New Baseline (Control) Data
1. Until computerized court reporting is introduced, baseline data must continue to be collected and recorded on the respective variables charts. Unless current systems in place are modified, all data will be available at the Supreme Court from the Registrar.
  2. Prior to the departure of the consultant team, no individual was identified by GOTG <sup>1/3</sup> having official responsibility for this function. It would seem logical for whomever has management oversight and responsibility for the court reporters to monitor their progress.
- E. Recording Intervention (Experimental) Data
1. It is critical that a number of intervention data points equivalent to the number of baseline data points be recorded on the variables charts.
  2. Intervention data should be collected and recorded in the exact same manner that baseline data is recorded. The calendar points at which court reporters are introduced should be indicated on each variable chart by drawing vertical lines corresponding to the date. The vertical lines will mark the end of baseline data and the beginning of intervention data.
  3. Intervention data should begin to appear on the charts when the court reporters are introduced. If the introduction of court reporters is staggered into two time periods, a second vertical line should be drawn on the charts at the point when the second group commences.
- F. Measuring for Change at Statistically Significant Levels
1. At least seven baseline data points are assumed will be recorded by the time the first group of court reporters are introduced to the Court. Therefore, at least seven intervention data points should be recorded before measuring for statistically significant change.
  2. Regardless, data should be collected and recorded at least throughout the end of January 1995. Ideally, data should be collected through the end of May 1995 in order to make a more accurate comparison of baseline and intervention data, since some court are in recess from July through September.
- G. Approaches to Measuring Change
1. The Celeration Line<sup>4</sup> suggests that a pattern of data points observed during baseline may be accelerating, decelerating, or stationary. The following procedure for this approach should be noted:
    - a) Divide the baseline period in half and separate the halves with a solid vertical line. If there are an odd number of data points, the middle data point should be on the dividing line.
    - b) Divide each half in halves again by drawing dotted vertical lines. Calculate the mean (x) level for each half and mark the dotted line at the mean value of each half.
    - c) Draw a straight solid line running through the two mean values. Continue drawing a straight line at the point where intervention data begins.
    - d) Count the number of data points above or below the solid line, depending if the desired outcome is to increase or decrease the value of data points. Divide this number by the total number of baseline observations to calculate proportion during baseline. This number will be used with Table 1 in the next step.
    - e) Count the number of intervention data points above or below the dotted line, depending if the desired outcome is to increase or decrease the value of data points; consult Table 5 to determine number of data points required for statistically significant change.

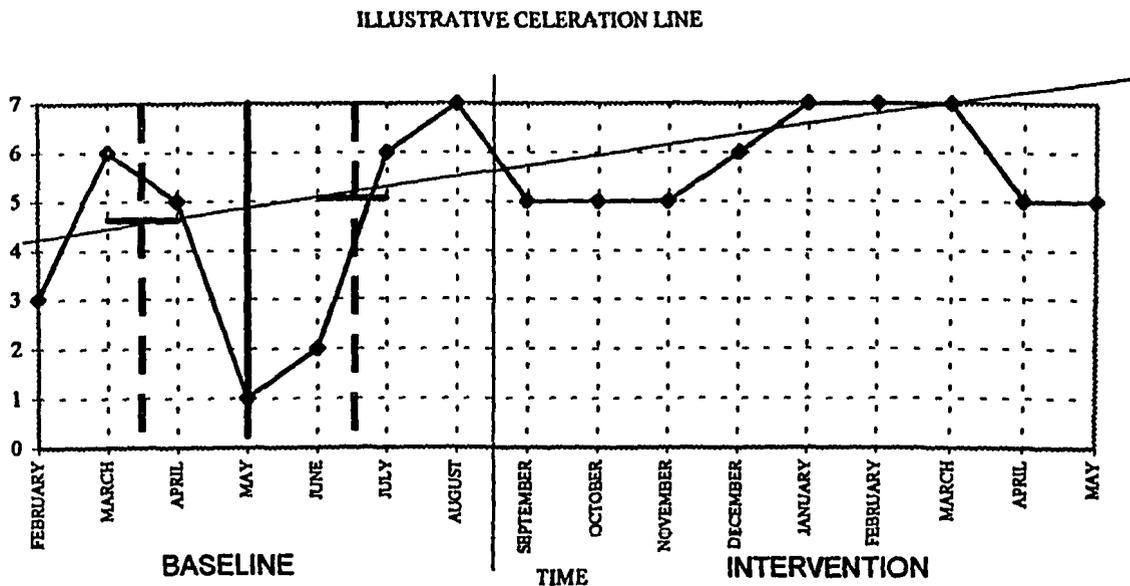
<sup>4</sup>Gingerich, Wallace J. and Feyerherm, William H., "The Celeration Line Technique for Assessing Client Change", Journal of Social Service Research, Washington University, St. Louis, Missouri, Volume 3, Number 1, Fall 1979, pages 99-111.

Table 5  
 Number of Intervention Observations Above (or Below) the Celeration Line  
 to Show Statistically Significant Change at the .05 Level

Prop. During Baseline	Number of Intervention Observations															
	4	6	8	10	12	14	16	18	20	24	28	32	36	40	60	100
.10	3	3	3	4	4	4	5	5	5	6	7	7	8	8	11	16
.20	3	4	5	5	6	6	7	8	8	9	10	11	12	13	18	28
.30	4	5	6	6	7	8	9	10	10	12	13	15	16	18	25	39
.40	4	5	6	8	9	10	11	12	13	15	16	18	20	22	31	49
.45	4	6	7	8	9	10	11	13	14	16	18	20	22	24	35	54
.50	-	6	7	9	10	11	12	13	15	17	19	22	24	26	37	59
.55	-	6	8	9	10	12	13	14	16	18	21	23	26	28	40	64
.60	-	6	8	9	11	12	14	15	17	19	22	25	27	30	43	69
.70	-	-	-	10	12	13	15	17	18	21	24	28	31	34	49	78
.80	-	-	-	-	-	14	16	18	20	23	27	30	34	37	54	87
.90	-	-	-	-	-	-	-	-	-	-	-	32	36	40	58	95

f) In the following example (figure 5), intervention data points observed above the celeration line is the desired outcome. There are three data points above the celeration and seven baseline data points. Proportion during baseline is closest to .45, and the total number of intervention data points is nine. According to criteria established in Table 5, change has not reached a statistically significant number.

Figure 5



2. The Two Standard Deviation Band Approach was first used by Shewart (Shewart Charts) in 1931 for evaluation in industrial quality control.
  - a) Briefly, the mean level of baseline data is calculated, then two standard deviation bands are drawn above and below the mean line. The approach

suggests that if two or more successive observation data points fall outside of the two standard deviation bands, then change has been statistically significant.

- b) Note the following procedure to compute two standard deviation bands:
- (1) Calculate the mean ( $\bar{x}$ ) score for baseline data: sum the scores and divide by the total number of scores.
  - (2) Compute score minus mean squared  $(s - \bar{x})^2$  for all scores.
  - (3) Sum this total.
  - (4) Subtract 1 from the number of scores  $(n - 1)$ .
  - (5) Compute the formula for standard deviation:

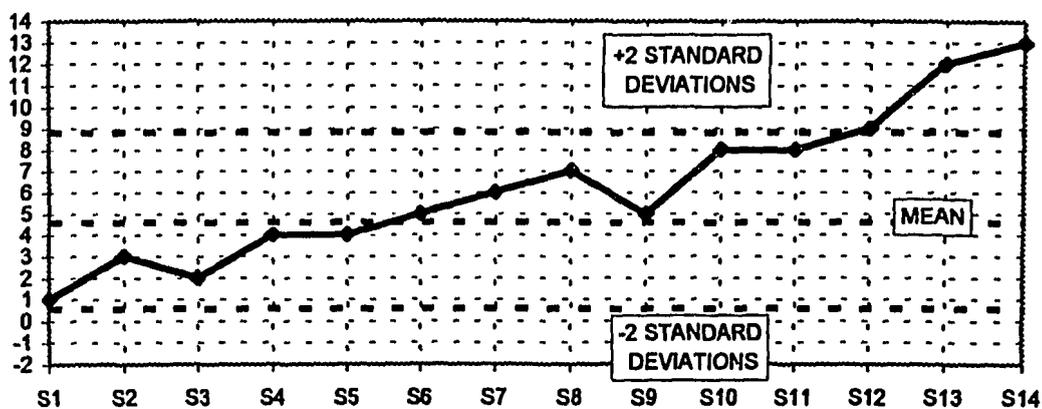
Square root of:

$$\frac{\text{sum of (scores minus mean)}^2}{\text{number of scores (n - 1)}} = \text{one standard deviation}$$

- (6) Double this number to make a two standard deviation band around the mean.
  - (7) Add the two standard deviations to the mean for the upper band and subtract the two standard deviations from the mean for the lower band.
  - (8) If two consecutive intervention data points fall outside of either band, statistically significant change will have occurred at the .05 level.
- c) Figure 6 shows statistically significant change because more than two consecutive intervention data point fall above the band.

Figure 6

#### ILLUSTRATIVE SHEWART CHART



Data available from 6-13 June 1994 are found in the annex section.

**ANNEXES:**

1. **Civil Cases on Appeal to the Supreme Court**
2. **Criminal Cases**
3. **Civil Suits**
4. **Miscellaneous Applications  
Divorce and Matrimonial Causes**
5. **Criminal Appeals**
6. **Time Lapse in Criminal and Civil Appeals  
from Registration to Submission**
7. **Cases Pending in the Supreme Court**
8. **Cause List**
9. **Variance in Proceedings Pending to Proceedings Scheduled**

**THE GAMBIA  
CIVIL CASES ON APPEAL TO THE SUPREME COURT  
1 FEBRUARY - 9 JUNE 1994**

<u>CASE NUMBER</u>	<u>DATE REGISTERED</u>
4  94	2/8/94
5  94	2/24/94
6  94	3/2/94
7  94	3/2/94
8  94	3/9/94
9  94	3/29/94
10  94	4/4/94
11  94	4/4/94
12  94	4/11/94
13  94	4/19/94
14  94	4/26/94
15  94	4/27/94
16  94	
17  94	5/16/94
18  94	5/23/94
19  94	5/25/94
20  94	5/31/94

Source: Supreme Court Civil and Criminal Cases Registry, Supreme Court

Note: Spaces are left blank when dates are unavailable.

**THE GAMBIA  
CRIMINAL CASES  
1 FEBRUARY - 9 JUNE 1994**

<b>CASE NUMBER</b>	<b>DATE REGISTERED</b>
3  94	2/24/94
4  94	2/28/94
5  94	3/1/94
6  94	3/31/94
7  94	4/15/94
8  94	4/15/94
9  94	4/28/94
10  94	4/28/94
11  94	4/28/94
12  94	4/28/94
13  94	4/28/94
14  94	4/29/94
15  94	5/5/94
16  94	5/5/94
17  94	6/2/94

Source: Civil and Criminal Cases Registry, Supreme Court

THE GAMBIA  
CIVIL SUITS - 2 FEBRUARY - 7 JUNE 1994

CASE NUMBER	DATE REGISTERED	CASE NUMBER	DATE REGISTERED	CASE NUMBER	DATE REGISTERED
28	2/2/94	71	3/9/94	114	4/22/93
29	2/3/94	72	3/9/94	115	4/22/93
30	2/3/94	73	3/16/94	116	4/22/93
31	2/3/94	74	3/17/94	117	4/25/93
32	2/3/94	75	3/17/94	118	4/26/93
33	2/3/94	76	3/22/93 *	119	4/26/93
34	2/3/94	77	3/17/93	120	4/27/93
35	2/3/94	78	3/17/93	121	4/28/93
36	2/3/94	79	3/18/93	122	4/28/93
37	2/3/94	80	3/22/93	123	5/3/93
38	2/3/94	81	3/22/93	124	5/4/93
39	2/3/94	82	3/23/93	125	5/9/93
40	2/3/94	83	3/23/93	126	5/9/93
41	2/3/94	84	3/24/93	127	5/10/93
42	2/3/94	85	3/28/93	128	5/9/93 *
43	2/4/94	86	3/28/93	129	5/10/93
44	2/4/94	87	3/29/93	130	5/20/93
45	2/7/94	88	3/30/93	131	5/20/93
46	2/7/94	89	3/30/93	132	5/13/93
47	2/7/94	90	3/30/93	133	5/16/93
48	2/7/94	91	3/22/93 *	134	5/16/93
49	2/10/94	92	3/30/93	135	5/17/93
50	2/14/94 *	93	3/31/93	136	5/17/93
51	2/11/94	94	4/4/93	137	5/18/93
52	2/11/94	95	4/4/93	138	5/18/93
53	2/15/94	96	4/5/93	139	5/18/93
54	2/15/94	97	4/6/93	140	5/23/93
55	2/17/94	98	4/8/93	141	
56	2/17/94	99	4/11/93	142	4/25/93 *
57	2/22/94	100	4/11/93	143	5/26/93
58	2/22/94	101	4/11/93	144	
59	2/22/94	102	4/14/93	145	5/30/93
60	2/22/94	103	4/15/93	146	5/30/93
61	2/22/94	104	4/18/93	147	5/31/93
62	2/24/94	105	4/18/93	148	5/31/93
63	3/23/94	106	4/19/93	149	6/1/93
64	2/24/94	107	4/19/93	150	6/1/93
65	2/28/94	108	3/3/93 *	151	6/1/93
66	3/1/94	109	4/19/93	152	5/31/93 *
67	3/1/94	110	4/19/93	153	6/6/93
68	3/1/94	111	4/20/93	154	6/6/93
69	3/3/94	112	4/20/93	155	6/6/93
70	3/9/94	113	4/21/93	156	6/7/93

Source: Civil Suit Cause Cook, Supreme Court

Notes 1 Spaces are left blank when dates are unavailable.

2 \* = date out of sequence.

**THE GAMBIA  
MISCELLANEOUS APPLICATIONS  
9 FEBRUARY - 24 MAY 1994**

<u>CASE NUMBER</u>	<u>DATE REGISTERED</u>
4  94	2/9/94
5  94	2/14/94
6  94	2/21/94
7  94	2/24/94
8  94	2/25/94
9  94	3/7/94
10  94	3/10/94
11  94	3/23/94
12  94	3/23/94
13  94	4/15/94
14  94	4/18/94
15  94	4/20/94
16  94	4/27/94
17  94	
18  94	5/3/94
19  94	5/18/94
20  94	5/24/94

Source: Miscellaneous Applications Registry, Supreme Court

**THE GAMBIA  
DIVORCE AND MATRIMONIAL CAUSES (DMC)  
1 JANUARY - 6 JUNE 1994**

<u>CASE NUMBER</u>	<u>DATE REGISTERED</u>
1  94	4/7/94
2  94	4/25/94
3  94	6/2/94

Source: Divorce and Matrimonial Causes Registry, Supreme Court

**THE GAMBIA  
CRIMINAL APPEALS 1993-94**

<b>CASE NUMBER</b>	<b>DATE REGISTERED</b>	<b>DATE SUBMITTED</b>	<b>LAPSED TIME (WEEKS)</b>
1  93	1/5/93		
2  93	1/6/93		
3  93	2/17/93		
4  93	4/21/93	3/21/94	47.7
5  93	5/18/93		
6  93	5/18/93		
7  93	5/18/93		
8  93	5/25/93		
MIS/APPL 1 93	7/27/93		
MIS/APPL 2 93	7/27/93		
9  93	8/25/93	3/28/94	30.7
10  93	10/14/93	3/17/94	22.0
11  93	12/28/93		
12  93	2/14/93	3/21/94	57.1
1  94	3/18/94		
2  94	4/19/94		
3  94	5/9/94		
4  94	5/12/94		

Source: Gambia Court of Appeals Registry  
Senior Registrar's Files

**THE GAMBIA  
TIME LAPSE IN CRIMINAL AND CIVIL APPEALS  
FROM REGISTRATION TO SUBMISSION**

<b>CASE NUMBER</b>	<b>WEEKS</b>
1 (4 93-CR)	47.7
2 (22 93-CI)	40.9
3 (27 93-CI)	28.7
4 (9 93-CR)	30.7
5 (41 93-CI)	40.9
6 (10 93-CR)	22.0
7 (12 93-CR)	57.1
8 (14 94-CI)	5.0
9 (15 94-CI)	5.4
10 (16 94-CI)	5.4

**CR = CRIMINAL CASES  
CI = CIVIL CASES**

**CASES PENDING IN THE SUPREME COURT  
AS OF 28 FEBRUARY 1994**

COURT	CIVIL SUITS	CIVIL APPEALS	CRIMINAL APPEALS	CRIMINAL CASES	DMC	MISC APPEALS	TOTAL
COURT NO. 1	43	6	4	1	0	1	55
COURT NO. 2	190	15	10	6	2	2	225
COURT NO. 3	224	9	5	9	7	5	259
COURT NO. 4	106	7	6	7	2	12	140
TOTAL	583	37	25	23	11	20	679
	131	9	6	5	3	5	158

**CASES PENDING IN THE SUPREME COURT  
AS OF 31 MARCH 1994**

COURT	CIVIL SUITS	CIVIL APPEALS	CRIMINAL APPEALS	CRIMINAL CASES	DMC	MISC APPEALS	TOTAL
COURT NO. 1	41	5	5	3	0	1	55
COURT NO. 2	191	17	9	9	2	3	231
COURT NO. 3	233	9	6	9	7	6	270
COURT NO. 4	142	7	5	8	1	6	169
TOTAL	607	38	25	29	10	16	725
WEEKLY AVERAGE	141	9	6	7	2	4	169

2

**CASES PENDING IN THE SUPREME COURT  
AS OF 30 APRIL 1994**

COURT	CIVIL SUITS	CIVIL APPEALS	CRIMINAL APPEALS	CRIMINAL CASES	DMC	MISC APPEALS	TOTAL
COURT NO. 1	41	3	3	1	0	2	50
COURT NO. 2	199	14	8	9	1	3	234
COURT NO. 3	230	11	8	11	6	7	273
COURT NO. 4	141	7	4	9	0	6	167
TOTAL	611	35	23	30	7	18	724
WEEKLY AVERAGE	142	8	5	7	2	4	168

**CASES PENDING IN THE SUPREME COURT  
AS OF 31 MAY 1994**

COURT	CIVIL SUITS	CIVIL APPEALS	CRIMINAL APPEALS	CRIMINAL CASES	DMC	MISC APPEALS	TOTAL
COURT NO. 1	35	1	2	0	0	1	39
COURT NO. 2	193	15	8	7	2	2	227
COURT NO. 3	245	9	8	12	5	6	285
COURT NO. 4	153	7	7	10	0	11	188
TOTAL	626	32	25	29	7	20	739
WEEKLY AVERAGE	146	7	6	7	2	5	172

Source: Principal Registrar, Supreme Court

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THE GAMBIA  
CAUSE LIST

	FEBRUARY	MARCH	APRIL	MAY
SCHEDULED	763	752	590	724
PENDING	679	725	724	739

THE GAMBIA  
VARIANCE IN CASES PENDING TO CASES SCHEDULED  
FEBRUARY - MAY 1994

PENDING	SCHEDULED			
679.0	763.0	(84.0)	FEBRUARY	-11%
725.0	752.0	(27.0)	MARCH	-4%
724.0	590.0	134.0	APRIL	23%
739.0	724.0	15.0	MAY	2%