

Face-to-Face Bank Data Description

The Bank Data is contained in file **Bankdata.zip**. After unzipping , it becomes an ASCII file, namely Plain Text (**Bankdata.txt**). This text, in turn, can be fed into any spreadsheet or statistical program.

The data was taken from a typical branch of a commercial bank. Measurements from 14 days of work were collected. Working hours on weekdays (Sunday-Thursday) were 8:30-12:30 and 16:00-18:00. On Fridays the branch was open between 8:30 and 12:00. (Three days out of 14 are Fridays: May 20, May 27 and June 3.)

The data constitutes of records, each corresponding to a specific service that is characterized as follows: service date, customer ID, station ID, server ID, time of customer arrival to the station, time of service start, time of service termination, waiting time and service time. There are 7708 records in our database, in total. A sample of the data is given in the table on the last page (as an Excel worksheet). It contains the first 23 records of the file.

Below we explain the meaning of the fields in the Bank Data file:

Date Service date. The measurements were collected between May 19, 1994, and June 3, 1994.

Cust ID Customer ID. Each customer gets an ID number upon entering the bank. This ID accompanies the customer until exit. A customer could visit several service stations. His ID was registered during service at each station, thus allowing a trace of the customer path in the bank.

Stat ID ID of service station. The measurements were taken in six server stations with ID's 1, 3, 4, 5, 6 and 8. The meaning of these ID's is the following:

- 1: Bankers;
- 3: Foreign Currency;
- 4: Tellers (Business Banking);
- 5: Tellers (Banking Services);
- 6: Overdraft;
- 8: Overall Services.

Several station had multi-servers. For example, station 5 is occupied by servers with ID's 12, 13, 14, 15, 16.

Server ID ID of server.

Arrival Time of customer arrival to the station.

These times were not measured directly (in contrast to service starts and terminations). The measurement system assumes that an arrival time of a customer to the first station on his route is equal to his arrival time to the bank entrance (which is recorded when a customer gets his ID). Each successive arrival time to a station is assumed to be equal to the preceding service termination time. In essence, the

assumption of *immediate transitions* between stations is implicitly used by the measurement system. This assumption seems to be typically a good approximation for the bank, where walking distances are short.

Serv Start Time of customer service start. Registered directly by the measurement system.

Serv Term Time of customer service termination. Registered directly by the measurement system.

Wait Time Waiting time (in minutes), calculated as the difference between service-start time and arrival time.

Serv Time Service time (in minutes), calculated as the difference between service-termination time and service-start time.

Data sample

Date	Cust ID	Stat ID	Server ID	Arrival	Serv Start	Serv Term	Wait Time	Serv Time
19/05/94	3008	1	5	8:27:13	8:29:43	8:37:06	2.5	7.383
19/05/94	3026	1	6	8:31:02	8:32:04	8:46:31	1.033	14.45
19/05/94	3025	1	8	8:30:52	8:32:23	8:33:56	1.517	1.55
19/05/94	3030	1	2	8:33:12	8:34:05	8:40:01	0.883	5.933
19/05/94	3015	1	8	8:36:13	8:36:57	8:38:11	0.733	1.233
19/05/94	3035	1	5	8:34:38	8:37:06	9:27:15	2.467	50.15
19/05/94	3043	1	8	8:39:04	8:39:49	8:48:46	0.75	8.95
19/05/94	3052	1	4	8:44:28	8:46:06	9:00:28	1.633	14.366
19/05/94	3041	1	2	8:37:34	8:46:16	9:01:25	8.7	15.15
19/05/94	3058	1	6	8:47:31	8:48:45	9:14:07	1.233	25.366
19/05/94	3059	1	8	8:47:53	8:48:46	8:58:11	0.883	9.417
19/05/94	3078	1	2	8:58:45	9:01:25	9:09:13	2.667	7.8
19/05/94	3088	1	4	9:04:25	9:04:48	9:18:00	0.383	13.2
19/05/94	3098	1	2	9:07:02	9:09:13	9:10:03	2.183	0.833
19/05/94	3094	1	2	9:05:52	9:10:03	9:19:46	4.183	9.717
19/05/94	3093	1	3	9:05:44	9:12:00	9:21:30	6.267	9.5
19/05/94	3086	1	8	9:03:41	9:12:25	9:12:36	8.733	0.183
19/05/94	3100	1	8	9:07:10	9:13:00	9:17:14	5.833	4.233
19/05/94	3112	1	6	9:12:44	9:15:07	9:27:11	2.383	12.066
19/05/94	3107	1	8	9:10:29	9:17:59	9:36:33	7.5	18.566
19/05/94	3121	1	3	9:16:57	9:22:06	9:28:48	5.15	6.7
19/05/94	3119	1	2	9:16:19	9:22:11	9:25:43	5.867	3.533
19/05/94	3145	1	6	9:26:37	9:31:03	9:31:34	4.433	0.517