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**Center for Service Enterprise Engineering (SEE)**  
<http://ie.technion.ac.il/Labs/Serveng/>



# USBank

## Database Tables and Fields

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## Contents

The Call Center of a US Bank .....	2
1.1    The calls table .....	6
1.2    The customer sub-calls table .....	6
1.3    The queue table .....	7
1.4    The server sub-calls table .....	7
1.5    The agents' shifts table .....	9
1.6    The agent profile table .....	9
1.7    The agent events table .....	10
1.8    The agent records table .....	11
Appendix 1 Dictionary tables .....	13
call type .....	13
segment parties .....	13
outcome .....	14
service .....	14
NIQ .....	15
segment type .....	15
service group .....	15
agent events .....	16
agent_groups .....	16

## **The Call Center of a US Bank**

The source of this data base is a large Call Center of a US bank. It has sites in New York, Pennsylvania, Rhode Island, and Massachusetts. The Call Center processes up to 300,000 calls a day, routes calls according to agent skills, and simultaneously queues calls across multiple sites. The Call Center provides the "correct" initial routing decision about 90 percent of the time and for the rest of the calls the center relies on a Network InterQueue. With the Network InterQueue, the Call Center routes the calls across a multi-node network based on business rules. The center provides several types of services: the most common of which are Retail, Premier, Business, Consumer Loans, Online Banking and Telesales.

The Call Center consists of about 900–1200 agent positions on weekdays and 200–500 agent positions on weekends, unevenly distributed through the different nodes. These agents are service agents that represent the members of the primary agent group or super group. Working hours are 24 hours a day, 7 days a week. The data are compiled on a daily basis, from March 26, 2001 to October 26, 2003. There are 200,000–270,000 calls per weekday, 120,000–140,000 per Saturday and 60,000–100,000 calls per Sunday (based on April, 2001).

### **Customer call history and raw call records**

A typical description of a call history\* is as follows. The customer-originated call enters the Call Center system at a particular node, usually via a VRU – Voice Response Unit. In some applications the call may also enter:

- via an Informational Announcement;
- via the Call Center voice messaging system; or even
- directly to an agent service group.

Typically, about 20% of incoming calls seek to speak to an agent, and the remaining 80% are satisfied with self-service transactions conducted or information received at the VRU, Announcement or Message stages.

At the next stage, for the customers who desire to speak to an agent, the call is transferred to be served by an agent who is capable of performing the desired service (has the required skills). The call may either be connected immediately or queued. For some multi-node Call Centers (such as our U.S. Bank), calls may be queued locally for some length of time (possibly zero), after which they will be queued simultaneously at several nodes (interqueue) - each such node having appropriate agents with the required skill-sets. The customer call will then wait until either an appropriately skilled agent at one of the nodes becomes free, or else the customer abandons the interqueue. At completion of service by the agent, the call either ends, or has a continuation. In the latter case, in our

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\* A large part of the following description applies in general to most types of Call Centers. However, each Call Center also has its specific idiosyncrasies. In the sequel, we will typically first describe universally relevant processes and variables, and then give details of those that are specific to given study.

data model, the original call is divided into the first customer sub-call which ends when the first service was completed, plus the remainder of the call, which may be divided into further sub-calls. During each of these further sub-calls the customer may abandon, while waiting to speak to the next agent. See Figure 1 for a schematic description (the green line) of a customer call broken into the first and second customer sub-calls.

In one application or study (an application or study refers to a particular Call Center), about 13 – 15% of customer calls that received service by an agent, were then transferred by the agent to the VRU (or Informational Announcement), or to another agent in order to receive additional service.

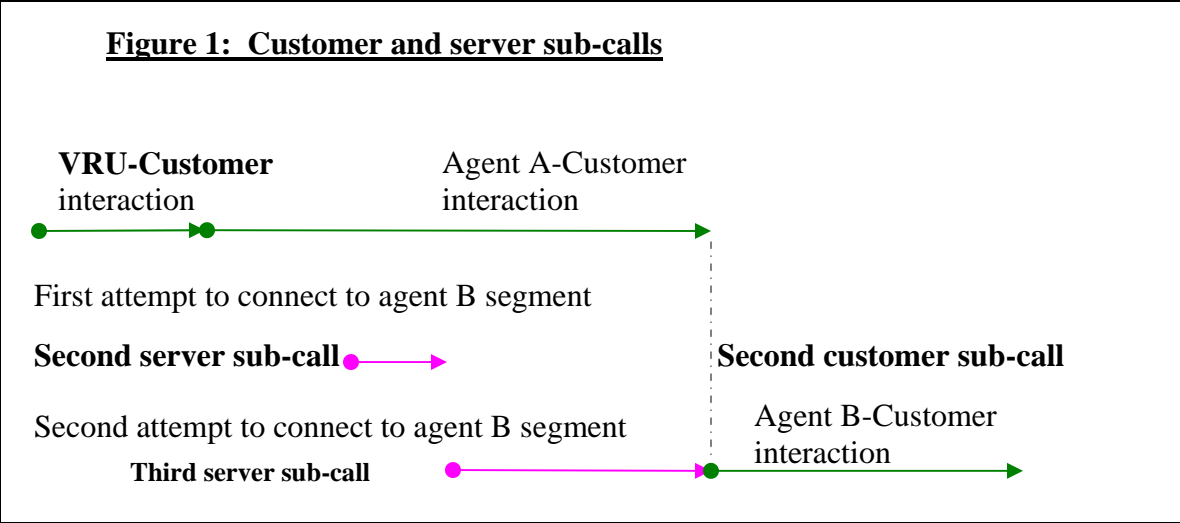
Within each sub-call, information is recorded in components called segments. These segments make up the physical records originally provided in the raw data. The fixed fields in each segment describe the following characteristics of the segment:

- call id (an identifier of the originating call)
- track id (an identifier of the line that is being occupied)
- segment start and end time stamps
- caller id (possibly coded, or originating phone number)
- answer party id (e.g. VRU or agent code)
- type of service or application
- call type (incoming or outgoing)
- segment component durations – talk time, hold time, ring time, queue time, delay time, wrap-up time ...

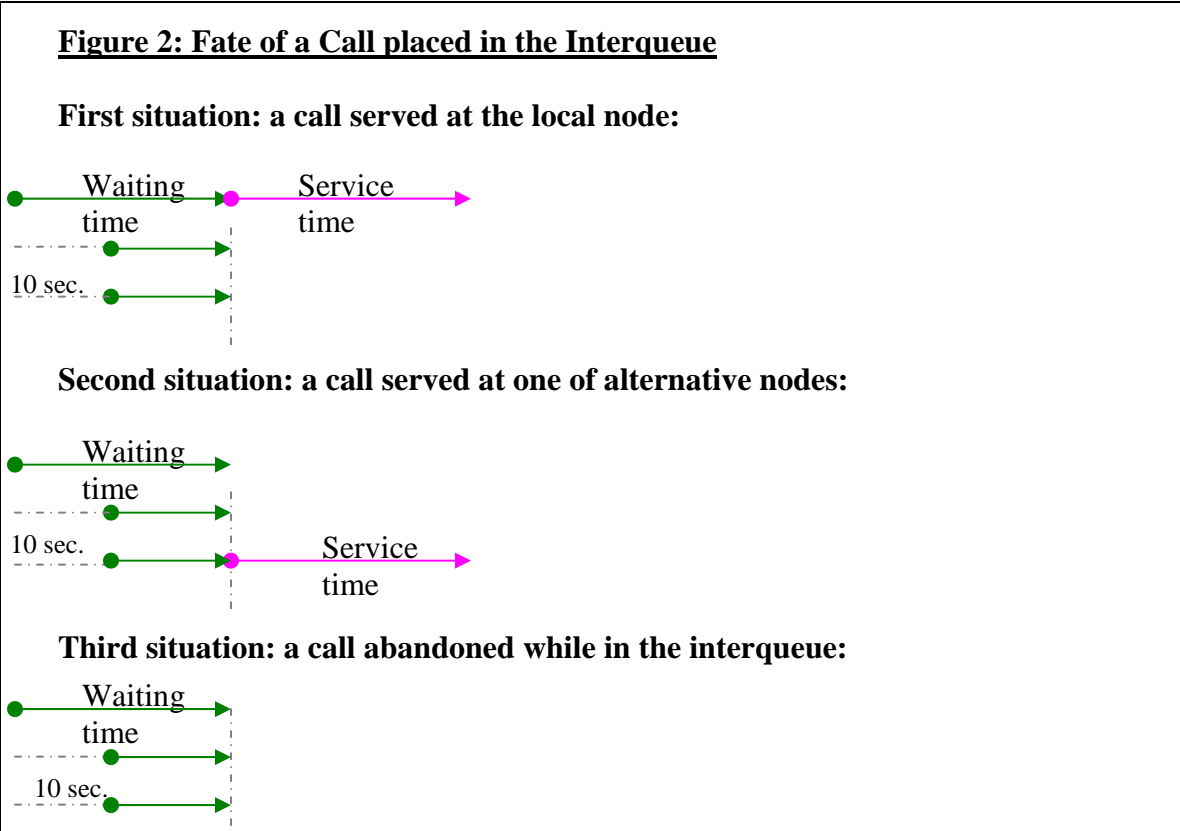
For example, when an agent is ready to answer an incoming call, there is a *ring time* during which the agent typically receives information about the customer before he actually answers the call. If the agent is being forwarded a call from another agent, there is a *delay time* while the agents converse before the customer is taken off hold and talks to the second agent. Furthermore, after the agent has finished providing active service and the customer has left (disconnected or continued on to the next sub-call), there is the *wrap-up time* during which the agent completes registering the transaction and during which he is not yet free to take a new call.

Thus each original customer call identified by a unique Call-Id at origination, is divided into one or more sub-calls. These sub-calls are, in turn, comprised of one or more segments. The segments, which are delineated by time stamps, describe components of the sub-call such as VRU interaction, Message interaction, Announcement listening, and agent interaction. Calls that seek agent service make up what is called the *offered volume* which is the source of the work load on the agents. A certain proportion of these calls may abandon before actually receiving agent service. Calls that only involve VRU, Announcement and Message segments are not included in the offered volume.

A further level of complication arises from the fact that agents may initiate calls (called *server sub-calls*) while dealing with an external customer's call. This phenomenon is also illustrated in Figure 1 where Agent A is trying to connect a customer with Agent B, and is only successful on the second attempt. This generates two server sub-calls, during which time the customer is on hold.



Below in Figure 2, we illustrate three scenarios for a customer call that is directed to the interqueue in a multi-node Call Center network. Note that we have set the delay before placing the waiting call into the interqueue to 10 seconds.



## Data description<sup>#</sup>

1. The **calls** table includes general information on each call that enters the Call Center on a particular day – each record in this table relates to a distinct call.
2. The **customer sub-calls** (cust\_subcalls) table includes customer-initiated calls that reach the *offered volume* – each record in this table is associated with a customer sub-call segment.
3. The **queue** (q\_records) table includes only the calls that request service from an agent (that is, that form part of the offered volume) – each record is a segment associated with a customer-initiated call. If the call is placed in the interqueue, then a separate segment is generated for each node relevant to that service.
4. The **server sub-calls** (server\_subcalls) table includes agent-initiated calls that consist of more than one server sub-call – each record in this table is segment associated with a new server sub-call.
5. The **agent records** table includes only the segments of the calls in which an agent was registered as an originating party, or as a destination party, or as a consultant of another agent – the third party. Each record corresponds to a server sub-call. A single customer call might have multiple agent records, and two (or more) agent records within the same call might correspond to the same agent.
6. The **agent profile** table has a record for each agent active on a given day – each record describes sign-on/signoff times, duration of idle, available, working/non-working (in the case of several shifts) periods during a day, number of incoming/outgoing/inside/consulting calls taken, number of calls terminated by customer/agent/transfer/undefined, percent of business calls registered, percent of incoming calls terminated by agent after only short-periods of time (Quick-Hang phenomenon).
7. The **agent shifts** table presents the shift ordinal number of agent, shift start and end time, service the agent is skilled to provide, and time intervals between shifts for those agents who operate more than one shift a day.
8. The **agent events** table provides codes for agent activity, for every second during a shift, by his extension number that identifies the agent. The event codes are for idle states, breaks, available state, sign-on states, sign-off states, agent originated call segment, or agent answered call segment.

The following paragraphs are titled using the above table names and include the list of all field names of a given table and their description.

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<sup>#</sup> More detailed information can be found in [http://ie.technion.ac.il/Labs/Serveng/files/Model\\_Description\\_and\\_Introduction\\_to\\_User\\_Interface.pdf](http://ie.technion.ac.il/Labs/Serveng/files/Model_Description_and_Introduction_to_User_Interface.pdf).

## 1.1 The calls table

1. call\_id – universal identifier associated with the entire call.
2. call\_type – type of call transaction (Incoming/Internal/Outgoing call) as determined by first segment of the call (see Appendix 1: [call type](#)).
3. entry\_service\_group – service group, according to the first segment of the call (see Appendix 1: [service group](#)).
4. entry\_service – type of service requested by the caller, according to the first segment of the call (see Appendix 1: [service](#)).
5. first\_service – first type of service requested by the caller from the primary agent (see Appendix 1: [service](#)).
6. exit\_service\_group – service group, according to the last segment of the call (see Appendix 1: [service group](#)).
7. call\_start – time in seconds<sup>†</sup> at which the call is started.
8. call\_end – time in seconds at which the call is ended.
9. duration – overall time customer spend in the system.
10. queue\_entry – time in seconds at which the customer enters the queue.
11. call\_outcome – reason that a call is disconnected, based on last segment outcome (see Appendix 1: [outcome](#)).
12. nsubcalls – number of services (sub-calls) that a caller requested during his call.
13. simple – boolean digit assigned to the number of services (sub-calls) (1 – a caller requests one service, 0 – a caller requests more than one service).
14. node – identifier of the site where the call was started.

## 1.2 The customer sub-calls table

1. call\_id – universal identifier associated with the entire call.
2. cust\_subcall – sequence number of service that a caller received during his call.
3. record\_id – ID number assigned to the record, and is created uniquely for all segments of particular day.
4. node – identifier of the site where the call is currently being processed.
5. service\_group – service group that handled the call (see Appendix 1: [service group](#)).
6. service – type of service received by the caller (see Appendix 1: [service](#)).
7. first\_service – first type of service requested by the caller from the primary agent (see Appendix 1: [service](#)).
8. segment\_start – time in seconds at which the segment is started.
9. queue\_exit – time in seconds at which the call exits the queue.
10. service\_entry – time in seconds at which the call enters the agent.
11. segment\_end – time in seconds at which the segment ends.
12. seg\_type – state of the call (Begin/End/Intermediate) (see Appendix 1: [segment type](#)).
13. outcome – cause of call termination (Handled/Transferred/Abandoned/..) (see Appendix 1: [outcome](#)).

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<sup>†</sup> Time in seconds is the time since the origin which is time 00:00:00 on 01/01/1970

14. seg\_parties – type of resource that answered the call (Agent/Supervisor/Conference/..) (see Appendix 1: [segment parties](#)).
15. wait\_time – delay time plus queue time.
16. queue\_time – queue time.
17. preservice\_wait – ring time and call\_type time.
18. service\_time – talk time and hold time.
19. hold\_time – amount of time a caller spent on hold on an agent's teleset.
20. undefined\_time
21. party\_answered – resource/code number that answered the call; for example, if the number is greater than 10000, then an agent answered the call.
22. agent\_group – skill–group is defined to be a group of agents that have the same skill–set to serve the different service types (see Appendix 1: [agent groups](#)).
23. main\_service – main–service is defined to be the most important service type that a skill–group serves. More specifically, the main–service is defined according to the percentage of the agent calls from each service type and the percentage of the service type calls in each agent group (see Appendix 1: [service](#)).

### 1.3 The queue table

Note that if a call is interqueued, then a segment will appear for each node at which it is queued.

1. call\_id – universal identifier associated with the entire call.
2. cust\_subcall – sequence number of service that a caller receives during his call.
3. record\_id – ID number assigned to the record, this is created uniquely for all the segments of particular day.
4. node– identifier of the site where the call is being queued
5. NIQ – location and/or result of call transaction (2– processed at node which is “local” i.e. the original node, 3– processed remotely, 4– processed at the node which is not “local”, 5– picked up somewhere else) (see Appendix 1: [NIQ](#)).
6. service – type of service received by the caller (see Appendix 1: [service](#)).
7. queue\_entry – time in seconds the caller enters the queue.
8. queue\_exit – time in seconds the caller exits the queue.
9. wait\_time – delay time and queue time.
10. queue\_time – amount of time a caller spent listening to music or silence while waiting to speak to an agent (wait step time).
11. outcome – cause of call termination (Handled/Transferred/Abandoned/..) (see Appendix 1: [outcome](#)).
12. niq\_delay – time in seconds a customer spent at the local node till call was placed at other node/nodes.

### 1.4 The server sub–calls table

The table contains the extra segments calls that do *not* appear in the customer sub–calls table.

1. call\_id – universal identifier associated with the entire call.
2. cust\_subcall – sequence number of service that a caller receives during his call.



3. server\_subcall – sequence number of server that handled the call.
4. record\_id – ID number assigned to the record, this is created for the all segments of particular day.
5. node – identifier of the site where the call is presents
6. agent – agent extension number that answers or originates the call segment.
7. party\_type – segment types where agent participates (1 – agent answers the call segment, 2 – agent originates the call segment).
8. service\_group – service group that handled the call (see Appendix 1: [service group](#)).
9. service – type of service received by the caller (see Appendix 1: [service](#)).
10. start\_time – date/time at which the segment is started.
11. end\_time – date/time at which the segment is ended.
12. segment\_start – time in seconds at which the segment is started.
13. segment\_end – time in seconds at which the segment is ended.
14. call\_type – type of call transaction (Incoming/Internal/Outgoing call) as determined by first segment of the call (see Appendix 1: [call type](#)).
15. seg\_type – state of the call (Begin/End/Interqueue/Transfer/Outgoing/..) (see Appendix 1: [segment type](#)).
16. outcome – cause of call termination (Handled/Transferred/Abandoned/..) (see Appendix 1: [outcome](#)).
17. seg\_parties – type of resource answered the call (Agent/Supervisor/Conference/..) (see Appendix 1: [segment parties](#)).
18. app\_code – application number (see AppMap table) the call was handled by.
19. work\_time – service time of agent.
20. wait\_time – delay time and queue time.
21. queue\_time – queue time
22. ctype\_time – amount of time an agent spent listening to a call type announcement prior to being connected to this call
23. ring\_time – the length of time required for the agent to pick up the call.
24. talk\_time – duration that the agent spent connected to the caller.
25. hold\_time – amount of time a caller spent on hold on an agent's teleaset.
26. wrapup\_time – amount of time an agent spent in a wrap-up state after the completion of the call.
27. party\_answered – resource/code number that answered the call; if the number is greater than 10000, then an agent answered the call.
28. business\_line – boolean digit assigned to the number of services received from an agent (1 – a caller received at least one service, 0 – otherwise).
29. line\_type – type of segment line: 0 – regular (agent answers or originates the call), 2 – consultant (agent consults on the call), or 1 – merged (2 segments associated with particular call merged: customer –agent A and agent A – agent B to customer – agent B).
30. other\_lines\_time – amount of time agent took part on another line in parallel to given segment line
31. agent\_group – skill-group is defined to be a group of agents that have the same skill-set to serve the different service types (see Appendix 1: [agent groups](#)).
32. main\_service – main-service is defined to be the most important service type that a skill-group serves. More specifically, the main-service is defined according to

the percentage of the agent calls from each service type and the percentage of the service type calls in each agent group (see Appendix 1: [service](#)).

### 1.5 The agents' shifts table

1. agent – agent extension number.
2. primary\_service – service the agent skilled to provide (see Appendix 1: [service](#)).
3. shift\_id – the ordinal number of shift.
4. shift\_start – time in seconds at which the shift is started.
5. shift\_end – time in seconds at which the shift is ended.
6. start\_time – date/time at which the shift is started.
7. end\_time – date/time at which the shift is ended.
8. duration – amount of time an agent operates a given shift.
9. node – identifier of the site where the call is presents.
10. interv – amount of time between a present shift start and the previous shift end.
11. agent\_group – skill-group is defined to be a group of agents that have the same skill-set to serve the different service types (see Appendix 1: [agent\\_groups](#)).
12. main\_service – main-service is defined to be the most important service type that a skill-group serves. More specifically, the main-service is defined according to the percentage of the agent calls from each service type and the percentage of the service type calls in each agent group (see Appendix 1: [service](#)).

### 1.6 The agent profile table

1. agent – agent extension number.
2. primary\_service – service the agent skilled to provide (see Appendix 1: [service](#)).
3. signon – time in seconds at which the agent starts operating in a particular day, start of first shift if there are more than one.
4. signoff – time in seconds at which the agent ends operating in a particular day, end of last shift if there are more than one.
5. start\_time – date/time at which the agent starts first shift.
6. end\_time – date/time at which the agent ends last shift.
7. dur – duration between sign on and signoff.
8. dur\_signon – duration agent was signed on during all shifts.
9. work\_time – part of dur\_signon, duration agent answered or originated the call.
10. dur\_break – part of dur\_signon, duration agent was on break states.
11. dur\_err – duration agent was between shifts, if there are more than one.
12. dur\_inc – duration of incoming calls.
13. dur\_out – duration of outgoing calls.
14. dur\_ins – duration of inside calls.
15. num\_inc – number of incoming calls taken.
16. num\_out – number of outgoing calls.
17. num\_ins – number of inside calls taken.
18. dur\_hold – duration of hold time, includes all calls.
19. dur\_wrapup\_inc – wrapup time for incoming calls.
20. dur\_wrapup\_out – wrapup time for outgoing calls.

21. serv\_hang0 – percent of incoming to business line calls terminated by agent lasting 0 second.
22. serv\_hang1 – percent of incoming to business line calls terminated by agent lasting 1 second.
23. serv\_hang2 – percent of incoming to business line calls terminated by agent lasting 2 second.
24. serv\_hang3 – percent of incoming to business line calls terminated by agent lasting 3 second.
25. serv\_hang4 – percent of incoming to business line calls terminated by agent lasting 4 second.
26. serv\_hangLT5 – percent of incoming to business line calls terminated by agent lasting 0–5 seconds.
27. serv\_hang5to19 – percent of incoming to business line calls terminated by agent lasting 6–19 seconds.
28. agent\_term – number of incoming to business line calls terminated by agent.
29. cust\_term – number of incoming to business line calls terminated by customer.
30. transfer\_term – number of incoming to business line calls terminated by transfer.
31. undefined\_term – number of incoming to business line calls with undefined termination reason.
32. n\_bcalls – number of business calls taken, for incoming calls only.
33. n\_nbcalls – number of non-business calls taken, for incoming calls only.
34. p\_bcalls – percent of incoming calls taken of business line.
35. node – identifier of the site where the call is presents.
36. agent\_group – skill-group is defined to be a group of agents that have the same skill-set to serve the different service types (see Appendix 1: [agent groups](#)).
37. main\_service – main-service is defined to be the most important service type that a skill-group serves. More specifically, the main-service is defined according to the percentage of the agent calls from each service type and the percentage of the service type calls in each agent group (see Appendix 1: [service](#)).

## 1.7 The agent events table

1. agent – agent extension number.
2. primary\_service – service the agent is skilled to provide (see Appendix 1: [service](#)).
3. event\_start – time in seconds at which the segment is started.
4. event\_end – end\_time – time in seconds at which the segment is ended.
5. start\_time – date/time at which the segment is started.
6. end\_time – date/time at which the segment is ended.
7. duration – amount of time agent performing an event specified in field event\_id.
8. event\_id – event codes for idle states (40–49), breaks (60–62), available state (50), sign-on states (20–21), sign-off states (30–31), agent originated (2) or agent answered (1) call segment (see Appendix 1: [agent events](#)).
9. business\_line – associated call received at least one service – 1, or otherwise – 0.
10. service – type of service received by the caller (see Appendix 1: [service](#)).
11. node – identifier of the site where the agent is situated.

12. record\_id – ID number assigned to the record, this is created for all the segments of a particular day.
13. agent\_group – skill–group is defined to be a group of agents that have the same skill–set to serve the different service types (see Appendix 1: [agent groups](#)).
14. main\_service – main–service is defined to be the most important service type that a skill–group serves. More specifically, the main–service is defined according to the percentage of the agent calls from each service type and the percentage of the service type calls in each agent group (see Appendix 1: [service](#)).

## 1.8 The agent records table

1. call\_id – universal identifier associated with the entire call.
2. primary\_service – service the agent is skilled to provide (see Appendix 1: [service](#)).
3. cust\_subcall – sequence number of service that a caller received during his call.
4. server\_subcall – sequence number of server that handled the call.
5. agent – agent extension number.
6. node – identifier of the site where the agent is present.
7. record\_id – ID number assigned to the record, this is created for all the segments of particular day.
8. service\_group – service group that handled the call (see Appendix 1: [service group](#)).
9. service – type of service received by the caller (see Appendix 1: [service](#)).
10. start\_time – time in seconds at which the segment is started.
11. end\_time – time in seconds at which the segment is ended.
12. service\_start – time in seconds at which the segment is started.
13. service\_end – time in seconds at which the segment is ended.
14. work\_time – service time of agent.
15. wait\_time – amount of time agent spent on delay or queue time, for agent originated call or when agent consults another agent which is online with the customer or third agent, otherwise it is 0.
16. queue\_time – queue time
17. ring\_time – the length of time required for the agent to pick up the call.
18. ctype\_time – amount of time an agent spent listening to a call type announcement prior to being connected to this call.
19. talk\_time – duration that the agent spent connected to the caller.
20. hold\_time – amount of time a caller spent on hold on an agent's teleset.
21. wrapup\_time – amount of time an agent spent in a wrap–up state after the completion of the call.
22. app\_code – application number (see AppMap table) the call was handled by.
23. call\_type – type of call transaction (Incoming/Internal/Outgoing call) as determined by first segment of the call (see Appendix 1: [call type](#)).
24. seg\_parties – type of resource answering the call (Primary Agent/Not Primary Agent) (see Appendix 1: [segment parties](#)).
25. outcome – cause of call termination (Handled/Transferred) (see Appendix 1: [outcome](#)).

26. `seg_type` – state of the call (Begin/End/Interqueue/Transfer/Outgoing/..) (see Appendix 1: [segment type](#)).
27. `party_type` – segment types where agent participates (1 – agent answers the call segment, 2 – agent originates the call segment, 3 – agent consults on the call segment).
28. `business_line` – associated call received at least one service – 1, or otherwise – 0.
29. `line_type` – type of segment line: 0 – regular (agent answers or originates the call), 2 – consultant (agent consults on the call), or 1 – merged (2 segments associated with particular call merged: customer –agent A and agent A – agent B to customer – agent B).
30. `other_lines_time` – amount of time agent took part on another line in parallel to given segment line
31. `party_answered` – resource/code number that answered the call; for example, if the number is greater than 10000, then an agent answered the call.
32. `agent_group` – skill–group is defined to be a group of agents that have the same skill–set to serve the different service types (see Appendix 1: [agent groups](#)).
33. `main_service` – main–service is defined to be the most important service type that a skill–group serves. More specifically, the main–service is defined according to the percentage of the agent calls from each service type and the percentage of the service type calls in each agent group (see Appendix 1: [service](#)).

## Appendix 1 Dictionary tables

Dictionary 1: *call type* (tables: [calls](#), [server sub-calls](#), [agent records](#))

<b>call type</b>	
1	Incoming call
4	Internal call
5	Outgoing call
6	Message key
7	Missing segment

Dictionary 2: *segment parties* (field *seg\_parties* in tables: [customer sub-calls](#), [server sub-calls](#), [agent records](#))

<b>segment parties</b>	
10	Trunk
11	Trunk + Conference
12	Trunk + Emergency
13	Trunk + Conference + Emergency
20	Agent
21	Agent + Conference
22	Agent + Emergency
23	Agent + Conference + Emergency
30	Announcement
31	Announcement + Conference
32	Announcement+ Emergency
33	Announcement + Conference + Emergency
40	Voice port
41	Voice port + Conference
42	Voice port + Emergency
43	Voice port + Conference + Emergency
50	Agent
51	Agent + Conference
52	Agent + Emergency
53	Agent + Conference + Emergency
80	Virtual trunk
81	Virtual trunk + Conference
82	Virtual trunk + Emergency
83	Virtual trunk + Conference+ Emergency
90	Interflow trunk
91	Interflow trunk + Conference
92	Interflow trunk + Emergency
93	Interflow trunk + Conference + Emergency

Dictionary 3: *outcome* (field *call\_outcome* in [calls](#) table; field *outcome* in tables: [customer sub-calls](#), [queue](#), [server sub-calls](#), [agent records](#))

<b>outcome</b>	
1	Caller Termination
2	Agent Termination
3	Undetermined Termination
4	Termination Error
11	Abandoned Short
12	Abandoned
13	Other Unhandled
14	Unhandled Error
20	Transfer
21	Outgoing Transfer
22	Agent Transfer
23	Process Remotely
30	NIQ Disconnected
40	Missing record
50	Outbound call

Dictionary 4: *service* (fields *entry\_service* and *first\_service* in [calls](#) table; fields *service*, *first\_service* and *main\_service* in [customer sub-calls](#) table; field *service* in [queue](#) table; fields *service* and *main\_service* in [server sub-calls](#) table; fields *primary\_service* and *main\_service* in [agents' shifts](#) table; fields *primary\_service* and *main\_service* in [agent profile](#) table; fields *primary\_service*, *service* and *main\_service* in [agent events](#) table; fields *primary\_service*, *service* and *main\_service* in [agent records](#) table)

<b>service</b>	
1	Retail
2	Premier
3	Business
4	Platinum
5	Consumer Loans
6	Online Banking
7	EBO
8	Telesales
9	Subanco
10	Case Quality
11	Priority Service
12	AST
13	CCO
14	Summit
15	Quick&Reilly
16	Mortgage
17	BPS

Dictionary 5: *NIQ* ([queue table](#))

<b>NIQ</b>	
2	Locally Handled
3	Process Remoted
4	Remotely Handled
5	Handled at another node
6	Terminated due to an error

Dictionary 6: *segment type* (field *seg\_type* in tables: [customer sub-calls](#), [server sub-calls](#), [agent records](#))

<b>segment type</b>	
1	customer call start
2	customer call start and end
3	customer call end
4	customer call middle segment
5	processed in another queue
6	outgoing
7	transfer
8	external transfer
9	agent to agent
10	supervisor key pressed
11	message key pressed
12	predictive message

Dictionary 7: *service group* (fields *entry\_service\_group* and *exit\_service\_group* in [calls](#) table; field *service\_group* in [customer sub-calls](#) table; field *service\_group* in [server sub-calls](#) table; field *service\_group* in [agent records](#) table)

<b>service group</b>	
1	VRU
2	Business Line
3	Announcement
4	Message
5	NonBusiness Line
6	NonCC Service
8	Overnight Closed
9	Trunk
10	Incoming NonBusiness
11	Internal
12	Outgoing
15	Disconnected
99	Unknown



Dictionary 8: *event id* (tables: [agent events](#))

<b>agent events</b>	
1	Incoming Call
2	Outgoing Call
20	Signon
21	Internal Signon
30	Signoff
31	Internal Signoff
40	Idle Noreason
41	Idle Break
42	Idle Papers
43	Idle Back to Customer
49	Idle Signon
50	Available
60	Short Break
61	Medium Break
62	Long Break

Dictionary 9: *agent groups* (tables: [customer sub-calls](#), [server sub-calls](#), [agents' shifts](#), [agent profile](#), [agent events](#), [agent records](#))

<b>agent_groups</b>	
1	Retail (agent group 1)
2	Retail (agent group 2)
3	Retail (agent group 3)
4	Retail (agent group 4)
5	Retail (agent group 5)
6	Retail (agent group 6)
7	Retail (agent group 7)
8	Retail (agent group 7)
9	Retail (agent group 9)
10	EBO
11	Retail (agent group 10)
12	Retail (agent group 11)
13	Retail (agent group 12)
14	Retail (agent group 13)
15	Retail (agent group 14)
16	Subanco (agent group 1)
17	Subanco (agent group 2)
18	Retail (agent group 15)
19	Premier (agent group 1)
20	Premier (agent group 2)
21	Premier (agent group 3)
22	Premier (agent group 4)
23	Premier (agent group 5)
24	Premier (agent group 6)
25	Premier (agent group 7)
26	Premier (agent group 8)

**agent\_groups**

- 27 Business (agent group 1)
- 28 Business (agent group 2)
- 29 Business (agent group 3)
- 30 Business (agent group 4)
- 31 Platinum (agent group 1)
- 32 Platinum (agent group 2)
- 33 Consumer Loans
- 34 Subanco (agent group 3)
- 35 Online Banking
- 36 Telesales
- 37 Subanco (agent group 4)
- 38 Subanco (agent group 5)
- 39 Subanco (agent group 6)
- 40 Case Quality (agent group 1)
- 41 Case Quality (agent group 2)
- 42 Priority Service
- 43 AST
- 44 CCO
- 45 Summit
- 46 Quick&Reilly
- 47 Mortgage
- 48 BPS