

## An examination of Switchover of calls of missive conveyance in a dual operating Android mobile device

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**Abstract:** The main objective of this paper is to provide the user with a liability to automatically switch between duple Sims of a phone when there transpires an issue in call connectivity. The only requirement is availability of information about both the registered numbers. In case of double sim handsets, when the call drops and fails to connect to the First network (which was initially dialed by the caller), This application switches and redirects the incoming call to the second sim on thereceiver's handset. In addition to this, the advantage of knowing participants in a conference call is another feature. The requisite for applying this, is just availability of both the contacts in a database of the caller. The current call redirection manages to provide us with ability to redirect the call from initial device to another one, this can be a landline or office phone or simply another mobile set. This requires a subscription from the telecom company, and cost charges may hike based onthe location of the destination number. The call forwarding can be setup and directed via applications and portals too. We proposed a method Call forwarding takes place within the present handset. Due to difference in bandwidths, the telecommunication companies may provide stronger network at some regions and time, whereas bit weaker at other. This can be taken advantage of, and when one network is unable, the call can be advanced by forwarding to another.

**Keyword :** *Android operating system, Cellular networks, Service Providers, Dual SIM Active Dual Stand By Call Forwarding Algorithms, LTE*

**1.Introduction** Call Forwarding takes place within the present handset. Due to differenceinbandwidths, the telecommunication companies may provide stronger network at some regions and time, whereas bit weaker at other. This can be taken advantage of, and when one network is unable, the call can be advanced by forwarding to another.

i. Smart call forwarding mechanisms in duos mobile is call forwarding from one SIM to other SIM in the same device while conversation is going on with another Phone.

ii. To study and implement the Paper when cell coverage area is poor or unexpectedly call is disconnected this proposed mechanism

automatically detect and connect the call to another SIM that already present in the DUOS Mobile. The method of working features of Smart call

forwarding mechanism . It must be a smart device with android operating system

which supports dual SIMs. This has to detect the signal strength always when the signal strength is becoming poor before the call is disconnected This Paper has to auto forward the call to another SIM that should be high signal strength. Smart call divert mechanism in duos mobile that phone must be dual SIM application based, configuring the phone by selecting a dual standby mode with a specific master configuration of the first SIM

application registering the second SIM application on a suitable cell of a wireless network activating a call forwarding function from the second SIM application to the first SIM application registering the first SIM application on a suitable cell of the wireless network operating the phone by processing standby functions of the first SIM application receiving and incoming call via the first SIM application and handling requests for outgoing calls from the first SIM application. Pre Process: This Paper is the process by which you reroute an incoming call. For example, you can send all your calls to the office while you're on vacation. Then you have the luxury of having your cell phone and still making calls but freely ignoring anyone who calls you. The options for call forwarding on your phone can be set by using either the Android operating system itself or the controls set up by your cellular provider. Scope of Project • Diverting calls can increase one's availability to a caller. The main alternative is an answering machine, but some callers do not wish to leave a recorded message, suspecting that the party will delay returning their messages. • Some businesses find that the human touch can improve contact, thus sales, but traditional wired answering services are expensive, so they have their This Paper to a call centre, so the client can reach an operator instead, of an answering call. Before the availability of call forwarding, commercial answering services needed to physically connect to every line for which they provided after-hours response; this required their offices be located near the local central exchange and be fed by a huge multi-pair trunk in which a separate pair of wires existed for each client subscriber. With call forwarding, there is no physical connection to the client's main telephone service, which is merely call-forwarded to the answering service (usually on a direct inward dial number) at the end of the business day. • Often, a suburb of a large city is a toll call from many suburban exchanges on the opposite side of the same city, even though all of these suburbs are a local call to the city Centre. A business located in such a suburb may therefore benefit from obtaining a downtown number as an "extender", to be permanently forwarded to their geographic suburban number. • Where unlimited local calls are flat-rated and long-distance incurs high per-minute charges,

the downtown number's wider local calling area represents a commercial advantage. Markham (directly north of Toronto) is long-distance to Mississauga (directly west of Toronto). A Markham business with a forwarded 416 number could receive calls from Toronto's entire local calling area without incurring long-distance tolls (as both legs, Mississauga → Toronto and Toronto → Markham, are each a local call).

## 2. RELATED WORK :

**2.1 CALL FORWARDING:** Call forwarding, or call diversion, is a telephony feature of some telephone switching systems which redirects a telephone call to another destination, which may be, for example, a mobile telephone, voicemail box or another telephone number where the desired called party is available. Call forwarding was invented by Ernest J. Bonanno. In North America, the forwarded line usually rings once to remind the customer using call forwarding that the call is being redirected. More consistently, the forwarded line indicates its condition by stutter dial tone. Call forwarding typically can redirect incoming calls to any other domestic telephone number, but the owner of the forwarded line must pay any toll charges for forwarded calls. Call forwarding is often enabled by dialing \*72 followed by the telephone number to which calls should be forwarded. Once someone answers, call forwarding is in effect. If no one answers or the line is busy, the dialing sequence must be repeated to effect call forwarding. Call forwarding is disabled by dialing \*73. This feature requires a subscription from the telephone company. Also available in some areas is Remote Access to call forwarding, which permit the control over call forwarding from telephones other than the subscriber's telephone.

**2.2 Call Forwarding uses:** Diverting calls can increase one's availability to a caller. The main alternative is an answering machine or voicemail, but some callers do not wish to leave a recorded message, suspecting that the party will delay returning their messages. Some businesses find that the human touch can improve contact, thus sales, but traditional wired answering services are expensive, so they have their calls forwarded to a call center,

so the client can reach an operator instead of an answering machine or voice mail. Before the availability of call forwarding, commercial answering services needed to physically connect to every line for which they provided after-hours response; this required their offices be located near the local central exchange and be fed by a huge multi-pair trunk in which a separate pair of wires existed for each client subscriber. With call forwarding, there is no physical connection to the client's main telephone service, which is merely call-forwarded

to the answering service (usually on a direct inward dial number) at the end of the business day. Often, a suburb of a large city is a toll call from many suburban exchanges on the opposite side of the same city, even though all of these suburbs are a local call to the city center. A business located in such a suburb may therefore benefit from obtaining a downtown number as an "extender", to be permanently forwarded to their geographic suburban number. Where unlimited local calls are flat-rated and

long-distance incurs high per-minute charges, the downtown number's wider local calling area represents a commercial advantage. Markham (directly north of Toronto) is long-distance to Mississauga (directly west of Toronto). A Markham business with a forwarded 416 number could receive calls from Toronto's entire local calling area without incurring long-distance tolls (as both legs, Mississauga → Toronto and Toronto → Markham, are each a local call). Some services offer international call forwarding

by allocating for the customer a local virtual phone number which is forwarded to any other international destination. The number was permanently forwarded and had no associated telephone line. As a means to obtain an inbound number from another town or region for business use, "remote call forwarding" schemes tend to be far less expensive than foreign exchange lines but more costly than using voice over IP to obtain a local number in the chosen city.

**2.3 Remote Access to Call Forwarding: Remote Call Forwarding (RCF)** requires neither a physical telephone set nor physical input by a customer to get calls forwarded. In this respect, it differs from the (similarly named) Remote Access to Call Forwarding in that the number is attached to a physical line

where it rings normally until a call is made to a remote number to enable redirection. To activate Remote Access to Call Forwarding, a subscriber calls a provider-supplied Remote Access Directory Number,

enters the telephone number of the line to be redirected along with a personal identification number (PIN). Remote Access to Call Forwarding allows incoming calls to be diverted and answered elsewhere if a subscriber cannot use their telephone normally (for instance, the number is assigned to a lost or stolen wireless handset or to a landline in need of repair service. In telecommunication, a remote call forwarding is a service feature that allows calls coming to a remote call forwarding number

to be automatically forwarded to any answering location designated by the call receiver. Customers may have a remote-forwarding telephone number in a central switching office without having any other local telephone service in that office. One common purpose for this service is to enable customers to retain their telephone number when they move to a location serviced by a different telephone exchange. The service is useful for business customers with widely-advertised numbers which appear on headedpaper, vehicles and various marketing literature. When customers ring, their calls are seamlessly forwarded to the new location.

**2.4 CALL FORWARDING IN GSM/3GSM PHONES:** GSM supports four types of call forwarding-Forward All Calls: This mode forwards every call that comes into your GSM number, unconditionally. This is what most people traditionally think of when you mention call forwarding. Forwarding if Busy-This mode forwards calls that come into your GSM number when your phone is busy. This means that instead of getting a busy signal, the caller is directed to a different phone number. Forward if Not Answered-this mode forwards calls that come into your GSM number you fail to answer them. This normally occurs after 15 seconds, but you can change this duration. Forward if Out of Reach- This mode forwards calls that come into your GSM number when your phone is either turned off, or out of the service area.

**2.5CALL-FORWARDING ALGORITHM FOR TELEMATICS:** In telematics, a car is typically equipped with a personal navigation device (PND) that has GPS positioning and

mobile communications capabilities (e.g., GSM, GPRS, or UMTS). In the hands-free phone service, when a person turns on the PND, all incoming calls are forwarded to the PND, and the person can receive hands-free calls (i.e. he or she can listen and talk through the car speaker and the PND's microphone). Existing hands-free car phone service is typically provisioned in two ways: the wire-line and the Bluetooth solutions. Both solutions require manual connection between the mobile phone and the communication device installed in the car. With CFA, we can provide automatic call forwarding for telematics, assuming that user 1's PND is installed with a software that can detect the triggering event 'when the PND is turned on/off'. Many PND products manufactured in Taiwan allow such modifications to accommodate telecom operators' needs. When the triggering event is detected, the PND sends a short message to UE1 to enable/disable the call-forwarding service. The CFA works as follows. After user 1 gets on her car and turns on the PND, the following steps are executed. The PND retrieves its position from the GPS receiver and sends a short message to UE1. This short message contains the PND's GPS position and the request for enabling call forwarding to the PND's phone number. After UE1 has received the short message, UE1's CFA obtains its position from the A-GPS mechanism and compares the PND's position with UE1's position. If their positions are close enough (e.g., within 10 m), the CFA considers that UE1 is in the car and rings user 1 to ask if he or she wants to activate the call-forwarding feature. User 1 simply presses one key to accept (or reject) the call-forwarding activation request.

**2.6 Dual SIM Dual Standby (DSDS):** DSDS devices work with one or two SIM cards inserted. You can receive calls and messages to both SIM cards. Before you can use the SIM cards, you have to enable them in the Dual SIM settings menu. Data traffic can only be handled on one SIM card at a time and you can select which SIM card you want to use. At any given time, you can select which SIM card to use for making a call or sending a text message (SMS). However, when one SIM card is engaged in a call, the other SIM card is temporarily disabled. This means, that, during a call, only the SIM card that you have selected to use (the active SIM card) is

available for communications. It is impossible to handle two calls simultaneously on two different SIM cards. When you use one SIM card to handle calls, the other SIM card is disabled automatically. You can still receive calls to the disabled SIM card by using the Dual SIM reachability feature. If the Dual SIM reachability feature is activated and you use, for example, SIM 1 to handle an ongoing call, any calls to SIM 2 get forwarded to SIM 1. This means that you can put the ongoing call on hold and answer the call forwarded to SIM 1 from SIM 2 (which remains disabled). A Dual SIM reachability uses the Call forwarding feature. Check with your network operator to see if call forwarding is available in the networks that your SIM cards use. Call forwarding may not be available if you use SIM cards from two different countries/regions.

**3. IMPLEMENTATION PROCESS:** The process of development mainly divided according to the module that are included in our application. There are mainly 2 modules in our project and each has a development process and all these are again combined into a single application. Now we will discuss briefly about each and every module included in our application.

**SERVICE 1: Register to be a Member Module.** The first module is the register to be a member module which will alert a person about his register first. In this the module comprises the mobile app which will serve as the display of information and as the input component for the details of user's. The next component is the server which will process the inputs and stores them in the database. It also obtains the data from the database and alerts according to the time at which the call is to be forwarded.

Finally, the last component in this service is the follow, if the number is unregistered so the user have to make changes in his phone by going to phone settings. Here the client or user have to go to Sim Management and make the changes, for some devices it's a by default numbers are unknown, but whereas in other phones it's a editable were the user can change his or edit his sim number's. So for the this service it's both methods are supporting. After this service the This Paper mobile application will automatically get the contacts for your mobile device and its run's as a background process. The user just have to enter his sim

number that is sim1 and sim2. If the user clicks the button next, this service won't go to the next page, because for few mobile devices it maybe a default numbers are saved and for few it may not be there to edit the number.

**SERVICE 2: Network Module.** In this service, we have the system components such as the mobile app, server with SQLite database. The mobile app is connected to the server and displays the application network information. The server will preprocess the data obtained from the components and stores in database. The other components that are used in this service which network the user is using, by the sim number of the user this This Paper application will identifies the user's network information is gathered.

Here the client can make his usage of applications by using this service. The network monitoring provides the details of the dual Sims monitoring information and this data is send to the server for processing. If, in case the user is having a conversation with the other person and suddenly the network is down, then the call is forwarded automatically. Generally, a strong mobile phone signal is more likely in an urban area, though these areas can also have some "dead zones", where no reception can

be obtained. The finally obtained application is simpler and easier to use as the implementation of the project is carried out in a perspective that it should be easily used by every person irrespective of age.

#### 4. CONCLUSION AND FUTURE ENHANCEMENTS

This project describes a deployed smartphone-based activity and application monitoring Call Forwarding takes place within the present handset. Due to difference in bandwidths, the telecommunication companies may provide stronger network at some regions and time, whereas bit weaker at other. This can be taken advantage of, and when one network is unable, the call can be advanced by forwarding to another.

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**Disclaimer:** We hereby confirm that the disclosure made above are complete and correct to the best of my information and belief. We will not be participating in the discussion and decision making of this matter. We agree that if We become aware of any information that might indicate that this disclosure is inaccurate or that We have not complied with the conflict of interest policy, we will notify immediately.

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