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U-verse Voice Installation Methods and Procedures

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Author(s):
Timothy M. Berner **ATTUID** : tb2923

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INTRODUCTION

This document provides methods and procedures for the installation of U-verse Voice within Single Family Units (SFU's) and Multi Dwelling Units (MDU's). This includes instruction for any instance by which the customer chooses to provide phone service to their active Monitored Home Alarm using U-verse VoIP.

1. Reason For Current Issue

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DATE	ISSUE	DESCRIPTION
February 26, 2007	Issue 0	Initial
March 30, 2007	Issue 1	Edit Steps in scenarios to correct wording.
June 7, 2007	Issue 2	Update Note 8 “Service Outage Detect” parameter
July, 2007	Issues 3-8	Various Updates - troubles with Up-Loading from Epic Editor
September 18, 2007	Issue 9	Update New Wall Plate Splitter Filter Configuration (Reference 12) & associated SFU & MDU Warning 3 Incorporate New Activation Limitations (Reference 13) and update Activation Warning 1
September 25, 2007	Issue 10	Update Reference 6, Note 3, Note 16, SFU Warning 2, MDU Warning 2, and correct associated work steps.
October 2, 2007	Issue 11	Update Reference 30, Update External Link Files, Update Note 1 (IP based Monitored Home Alarms, & Update SFU Note 2
October 16, 2007	Issue 12	Added Note 18 regarding replacement of ONT Battery on reconnect orders/installations.
November 11, 2007	Issue 13	Removing prior update until final resolution has been agreed upon.
November 16, 2007	Issue 14	Update T2 Phone Number in the Contact List.
November 26, 2007	Issue 15	Update Note 7 - leave the plastic tape/tab in place on the AUX Line of the RG.
November 27, 2007	Issue 16-18	No Updates - Apex Authoring Errors
November 27, 2007	Issue 19	Update Note 15 - inserted company mail address & recipient of 911 & TOS forms when in support of paper copies in lieu of GCAS & electronic signatures.
November 28, 2007	Issue 20	Added Note 18 regarding UM, Updated Section 11 with links to UM documentation and updated procedures when demonstrating the Web Portal to include instruction to establish UM with the Customer (Section 7.2).
December 14, 2007	Issue 21	Added section 10.10.1, and updated section 4, note 19 concerning the FTTP ONT battery and Belkin battery installs. Removed all reference to ADT. Updated the telephone numbers for Brinks in section 13. Added section 3 with the alarm companies contract provisions. Added section 10.14 - U-verse voice check list.
December 18, 2007	Issue 22	Removed all reference to Protection One
April 3, 2008	Issue 23	Update Note 8, New 2Wire Release negates the need for the manual setting of the service outage detect parameter

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		on the RG
October 22, 2008	Issue 24	Update Note 3 &16, Contact Table and Checklist - adjusted the M&P to reflect new changes to the process for handling U-verse Voice Orders

2. Verification

Review and follow all the Verification steps outlined before proceeding.

1. Verify the desired location of the Residential Gateway (RG) with the customer, this is at your discretion.

2. Verify if the number to be installed as a U-verse Voice number is currently their POTS phone number or a newly assigned number. (If it is a POTS number, currently assigned, this will require U-verse Voice number activation via the IVR. This activity will disrupt the phone service during the installation and no outgoing & incoming calls will be received until the work is complete, to include the disabling of the alarm system and POTS voicemail. This will need to be explained to the customer.)

3. For SFU only, verify if the U-verse Voice number is to be the only number within the residence providing phone service, thus no POTS lines. If the U-verse Voice number is a secondary line and there is a POTS line as the primary line for the home you will need to verify the location that the U-verse Voice number is to appear and wire accordingly. For these instances you will not be using Pair 1 to distribute U-verse Voice phone service. You will need to identify an alternate spare pair for the distribution of the U-Verse Voice phone service. Note: If the only location within the residence is the room that the RG is located, you may plug a phone directly into the L1L2 port of the RG (labeled "LINES 1 & 2" on the RG - see Reference 7), provided this location is agreeable to the customer. Else refer to “Note 11”, Section 4. This will work for wireless phones that have base stations as well.

4. Verify if there is a Monitored Home Alarm system at the customer location. (If it is a stand alone system that only uses a local alarm and does not report to an alarm company or the police/fire, the telephone service will not impact its operation.)

5. Verify that the customer has contacted their Monitored Alarm Service provider, the Monitored Home Alarm is to be serviced by U-verse Voice and the Monitored Alarm Service Provider has confirmed compatibility with U-verse Voice. Also, remind the customer they will need to contact their Monitored Alarm Service Provider after the installation of U-verse Voice to ensure the alarm is functioning properly.

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3. Alarm Contract agreements

Attached are the provisions within the alarm company's contract with AT&T that the Premises Technician will adhere to.

3.1. Brinks

AT&T Premises Technician's will be trained:

1. on the manner in which AT&T U-verse Voice service should be wired in the customer's home to support existing Brink's Alarm Monitoring Services
2. on the manner in which AT&T U-verse Voice service may require re-wiring when an existing AT&T U-verse Voice customer subsequently purchases Brink's Alarm Monitoring Services
3. to ask new AT&T U-verse Voice customers whether they have existing Alarm Monitoring Services; if so, who their service provider is; and whether their Alarm Monitoring Services use an Internet line or a telephone line as the communications pathway
4. to inform existing Brink's customers whose Alarm Monitoring Services will use AT&T U-verse Voice or AT&T U-verse HSIA as the communications pathway to call Brink's and to test the Alarm Monitoring Services both prior to and after U-verse service has been installed and to provide customers with the Brink's Toll Free Number
5. to inform existing Brink's customers that their AT&T U-verse Voice service or their AT&T U-verse HSIA service, as applicable, will not function during a power outage as the communications pathway for Brink's Alarm Monitoring Services unless they maintain battery backup power for the Residential Gateway and the Optical Network Terminal, if they have one, and to advise AT&T U-verse HSIA-only customers how to obtain a Residential Gateway battery backup
6. to inform new AT&T U-verse Voice customers who say that they have no existing Alarm Monitoring Services that, if they do decide to purchase Alarm Monitoring Services in the future, they should call AT&T before installation of such service and that, if the Alarm Monitoring Services will use AT&T U-verse Voice as the communications pathway, it is likely that AT&T will need to re-wire their AT&T U-verse Voice service prior to installation of the Alarm Monitoring Services
7. when they re-wire a customer's AT&T U-verse Voice service prior to installation of Brink's Alarm Monitoring services, to inform the customer that their AT&T U-verse Voice service will not function during a power outage as the communications pathway for Brink's Alarm Monitoring Services unless they maintain battery backup power for the Residential Gateway and the Optical Network Terminal, if they have one

NOTE:
If Brink's installs services after AT&T U-verse Voice is installed and customer did not call AT&T to re-wire U-verse Voice before installation of Brink's services, Brink's will install a line seizure connector, which should ensure

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proper line seizure.

4. Notes

This section is critical. You must read and understand all the notes contained within this section before proceeding. Further, you must follow all the instructions contained within the notes.

Note 1: For any Monitored Home Alarm system you must ask the customer what the transport medium is for that system, Cellular, IP (Internet) or POTS (to become U-verse Voice), this will determine the following:

A. If the Monitored Home Alarm uses Cellular Service and there is no U-verse Voice installation, there is no work for you to perform and you should refer to ATT-TELCO-IS-002-300-034 for the installation regarding the HSIA and IPTV. Do Not Touch the Alarm System.

B. If the Monitored Home Alarm uses IP (Internet Connection - thus there is no connectivity to POTS, nor will there be any on U-verse Voice), then you must ensure that this is installed directly into the RG (yellow ports), not the U-verse Voice ports or jacks. Follow the same warnings as you would for installing this on U-verse Voice. This configuration is rare, but viable. You must follow the same instructions (**see note 4 below**)as you would for installing this over U-verse Voice.

C. If the Monitored Home Alarm used POTS and is going to be placed on U-verse Voice, continue to **Notes 3, 4, 8, 9 & 14**

Note 2: Regarding all the SFU drawings, they are depicted using a Splitter/Balun type connection within the NID. This is to be used for IPTV installations only. The Splitter/Filter is to be used for HSIA and/or U-verse Voice only installations.

Note 3:*Be aware* that the RJ31x jack used to connect to the alarm panel should be wired so that it is electrically the "closest" U-verse Voice telephone device to the RG or it is the first U-verse Voice telephone device in Daisy Chain to all other U-verse Voice telephone devices in the home. This is necessary to allow the alarm panel to seize the service to initiate an alarm call, thus terminating any existing calls and preventing initiation of any new calls while the outgoing alarm call is in progress. If this is not the case, you must inform the customer the wiring was installed incorrectly, that the Monitored Home Alarm will not work as intended by the Alarm Company and that you will not be able to continue with the U-verse Voice aspect of the of the install unless this situation is corrected. Inform them that you can remedy the issue and that this will be billable. Then and only then move forward with the U-verse Voice installation with their concurrence. If the customer is not willing to allow us to do the repair to the premises wire that feeds the RJ31x, then you need to Jeopardize the order accordingly. See **Note 16** for more detail.

Note 4: The customer should have contacted their Monitored Alarm Service provider and confirmed compatibility with U-verse Voice. Following the installation of U-verse Voice it is the customer's responsibility to coordinate testing of the Alarm system with their Alarm Service provider. You should not call the Monitored Alarm Service Provider. The Premises Technician is required to provided the special local toll free numbers for Brink's to the customer, if the customer has their service (see section 13).

Note 5: You need to install a Battery Back Up Unit (BBU). This equipment is installed in conjunction with any U-verse

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Voice installation. See Reference 3 for a depiction of the Unit and associated LED indications. See reference 11 or the link in Section 10 for the installation steps found in the Belkin user manual. Furthermore, you must review with the customer the contents found in the section labeled Electrical Power within the “911 Acknowledge document” (to include the risks around 911 Service disruption) and advise the customer weather they do or do not have an ONT. (see “Reference 10”, Section 10).

Note 6: Home Alarm versus Monitored Home Alarm. A Monitored Home Alarm uses phone service to indicate/detect the system and associated alarms. The Home Alarm (non-Monitored) does not have phone service attached.

Note 7: For any installation of U-verse Voice where there is a Monitored Home Alarm, you must not remove the plastic tape/tab from the ADL Line port of the RG (labeled AUX. LINE on the RG - see Reference 7). You also must inform the customer that they are not allowed to plug anything into the L1L2 and the ADL Line ports of the RG directly.

Note 8:This Note only applies to any RG for which the 2Wire Software Release is older than RG Software Release (5.29.105.94). For the installation of U-verse Voice when a Monitored Home Alarm is going to be serviced by U-verse Voice you must verify that the “Service Outage Detect” parameter within the RG is set to on. It will be turned on by checking the box found under this parameter within the RG.

Sub Note A:IF you need to perform an RG swap, you should check the previous settings on the old RG. This will be used to determine if we need to reapply the “Service Outage Detect” parameter on the new RG.

Sub Note B:In the case of Factory resets. you must reset the “Service Outage Detect” parameter on the RG as this action will nullify the “Service Outage Detect” parameter.

Further, you need to warn customers that have Monitored Home Alarms against performing factory resets as this action will nullify the “Service Outage Detect” parameter. If this action is performed they should contact AT&T for assistance in restoring this parameter.

Lastly, follow these steps to set the “Service Outage Detect” parameter.

1. With your IFD plugged into the RG open an Internet Explorer page and type “http://home” in the address line.
2. Click on the voice icon at the top of the page, which should take you to: http://home/xslt?PAGE=V00&THISPAGE=NEXTPAGE=V00
3. In the voice network setup click on the Phone Line Details link "Phone 1"
4. Check the “Service Outage Detect” option and click on the SUBMIT button
5. Click on the CANCEL button to return to the prior page and perform steps 3 and 4 for "Phone 2".
6. see Reference 8 & 9 for screen shots

Note 9: Advise the customer they must not disconnect wiring from the RG to the wall jack. Doing so will disable U-verse Voice, 911 calling, and the Monitored Home Alarm (if using U-verse Voice). Also advise the customer not to move the RG or plug anything into the telephone ports on the RG.

Note 10: Ensure the customer understands that U-verse Voice will only work with phones (and other PSTN devices) that are Touchtone capable. If they have phones that can be optioned to work with Pulse Dialing, they need to set the

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option to Touchtone, not Pulse.

Note 11: In regard to the installation of the jack in the room where the RG is located, there will be no charge for any of this work. You may be required to install a second jack in the room for the phone and should verify with the customer the location of this jack. If the location of the new jack is the location that the customer would like to have the phone, then wire the jack accordingly. Overall, the room must be made whole in order to provide the customer phone service in the same room as the RG and there will be no charge for any of the associated work.

Note 12: Activation of the U-verse Voice number(s) should be done as the last thing for the U-verse Voice install (not the total U-verse install). This action and the associated steps found in Section 6, are only required when a POTS number is going to be ported to the U-verse Voice service. This action and the associated steps must **not be** done until an outbound test call directly from the L1L2 port has been made successfully. **And**, for a new U-verse (Triple Play order) Installation, that all the Set Top Boxes have been successfully loaded. (Outbound calls can be made only after the RG has been activated and the xDSL wiring is complete - It is strongly suggested that you use your handset.). Once these are done then call the IVR which will complete the number porting, update eNum as well as the voicemail platform. See Section 6 for full detailed steps.

Note 13: Once all wiring has been completed, tag the U-verse Voice wiring with a quick-tie tag (preferably red) and write “U-verse Voice” on side of the tag and “Don’t Remove” on the other. This must be done at the RG connection, the jack location that is connected to the RG and at the NID (Demarc) where the premise wiring is connected. This must be done to ensure awareness of the U-verse Voice line and the associated implications to disconnecting the wiring. If any of these lines are disconnected the U-verse Voice service will not work and will impair Home Alarms if they are present.

Note 14: For any installation that will include Monitored Home Alarms, you must not work on the Alarm System, test the system, Install the RJ31x or rearrange any wiring between the RJ31x and the Monitored Home Alarm.

Note 15: Once all the above verification is complete and the customer chooses to continue with the installation you must obtain their signature on the “Terms of Service” (TOS) Acceptance Form and “911 Acknowledge” documentation. Obtaining these signatures via GCAS and printing out copies of the signed documents for the customer. If the customer does not want to sign in GCAS, you must provide one blank copy to the customer for their records and return the signed documents to your supervisor. Your supervisor will then send them via company mail for input into the FileNet system. The copies of these forms must be sent to Steven L. White (sw4634), Senior Systems Analyst, 909 Chestnut St., Room: 30-B-1 Saint Louis, MO, 63101.

Note 16: If the customer chooses to change the due date, halt the installation, or if the customer refuses to sign the TOS and 911 documents you will need to inform the customer that we will not perform the installation. Ensure that they understand that the implications for either a cancellation or a new due date are as follows, potential for no phone service (if customer is porting from a CLEC, CLEC may disconnect service on the scheduled port date), potential for not having any messaging service. Then reverify that they wish to cancel or change the date of the installation. In the event that they so choose to cancel or change the Due Date, you must Jeopardize the order accordingly. For more detailed information follow the order handling document found in the **Related Document Section**, number 7.

Note 17: Once the signatures are obtained determine the most efficient method of installation from the scenarios outlined below. If U-verse Voice is being installed at a Single Family Unit, and is going to supply phone service to the Monitored Home Alarm, **you must run a new line (Cat 5) from RG location to NID directly**. This is being done to ensure there is a clean line from the RG to the NID as well as to mitigate liability.

Note 18: For any installation by which the customer has selected U-verse Messaging (UM) as part of their service package you must establish the UM with the customer. This should be done via the Web Portal. There are links in section 11 that provide direction on how to establish UM as well as the use of the Set Up Wizard.

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Note 19: On FTTP customers the premises technician will follow section 10.10.1. The letter in figure 39 will be left with the customer.

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5. Installation Section for Single Family Units (SFU's)

5.1. Notes & Warnings

SFU Note 1: For all the Scenarios in this section the only thing that is depicted is the wiring related to the installation of U-verse Voice. All other wiring information regarding HSIA and IPTV can be found in APEx document ATT-TELCO-IS-002-300-034. Also, CAT 5 Cable is a minimum requirement for the installation in any SFU. If this requirement can not be met, you must not perform the install, notify the customer, inform the U-verse Network Dispatch Center and cancel the order.

SFU Note 2: If U-verse Voice is being installed at a Single Family Unit, and is going to supply phone service to the Monitored Home Alarm, you must run a new line (Cat 5) from the RG location to NID directly. This is being done to ensure there is a clean line from the RG to the NID. You must ensure that the "Service Outage Detect" parameter is turned on. See "Note 8" in Section 4. Secondly, if the customer does not have a Monitored Home Alarm, but is going to have one installed at a later time (after U-verse Voice is installed), you must notify the customer that they will need to contact AT&T and schedule an appointment with us so that we can ensure that the proper wiring is in place to accommodate the Monitored Home Alarm. This must be done before the Monitored Home Alarm is installed.

SFU Note 3: For any installations where U-verse Voice is going to be added to current U-verse services, or replacing any other DSL type service, you must remove the PSTN Blocking Filters that may have been previously installed.

SFU Note 4: Second U-verse Voice line is to be installed. The RG has multiplexed line 1 and line 2 at the L1L2 port of the RG. Therefore, line 1 will appear on the inner wires of the port and line 2 will appear on the outer pair of the port. As such, both lines will appear at the first jack (via the cord installed from the RG to the first jack) and can be made to appear at the remaining jacks within the living unit, when and where appropriate, by wiring accordingly with premises wiring spare pairs. If the installation is going to incorporate Monitored Home Alarms, you must use the Wall Plate ("Reference 6"). On the Wall Plate you will find that line 1 and line 2 are found on the ports labeled Line1/2 and reversed at Line 2/1. Use these ports and premises wiring spare pairs to deliver the second line to remaining jacks within the living unit, when and where appropriate. Lastly, you will need to verify that both lines appear at every location that they are intended to be delivered as well as follow the appropriate steps found in Sections 7& 8for both lines.

SFU Note 5: For any work order that requires the setup for the addition of a Monitored Home Alarm after the installation of U-verse Voice has been completed, find the appropriate scenario from below. The appropriate scenario will be used to establish the wiring that will be needed in order to support the installation of the Monitored Home Alarm. The only difference is that the Pair 1 of the required "Home Run" and Pair 2 of same, will be connected together at the NID. This should include any Premises Wiring required to support U-verse Voice at the remaining jacks within the living unit. Lastly, ensure the wiring at the NID is tagged accordingly. Tag the pair feeding the Monitored Home Alarm as "to Alarm" and the pair back-feeding U-verse Voice to the living unit as "from Alarm". Do not forget to tag both pair as "U-verse Voice" & "Don't Remove". Regarding the charges for this work you must refer to the Billing M&P, APEx Document # ATT-TELCO-IS-002-300-050.

SFU Warning 1: Once all wiring has been completed, tag the U-verse Voice wiring with a quick-tie tag (preferably red) and write "U-verse Voice" on side of the tag and "Don't Remove" on the other. This must be done at the RG connection, the jack location that is connected to the RG and at the NID (Demarc) where the premise wiring is connected. This must be done to ensure awareness of the U-verse Voice line and the associated implications to disconnecting the

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wiring. If any of these lines are disconnected the U-verse Voice service will not work and will impair Monitored Home Alarms if they are present.

SFU Warning 2: For the installation of U-verse Voice, where a Monitored Home Alarm is present within the SFU scenarios it is important to note that there is a new piece of equipment that will be used to deliver service. This is the Wall Plate Splitter/Filter. This device can be used in either a wall mount phone (kitchen) or standard jack (non-wall mount phone). (see “Reference 6”, Section 10) With the use of the Wall Plate Splitter/Filter, you must keep in mind that this device will **not** support a secondary line that is POTS, you must wire around it and/or use another jack as required.

SFU Warning 3: You must place the Alarm Present dip-switch setting to “Yes” for any installation where a Monitored Home Alarm is going to be used in conjunction with U-verse Voice. Subsequently, any installation aside from those scenarios listed above, then you must place the Alarm Present dip-switch setting to “No”.

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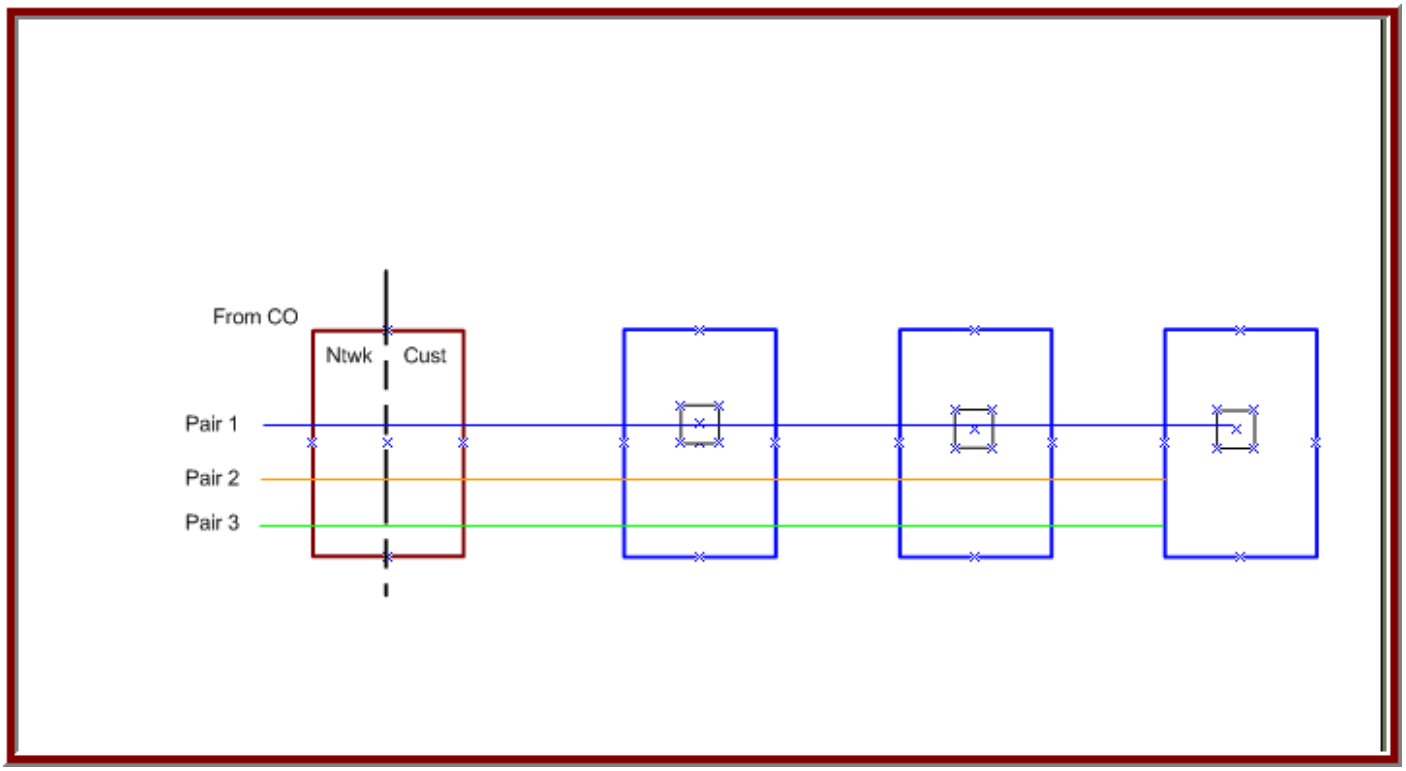
5.2. A - Existing POTS set-up for SFU Premises Wiring in Daisy Chain

Figure 1: Scenario A



This diagram is to be used as a reference regarding the current implementation for POTS where the Premises Wiring has been installed as “Daisy Chain”. There are not steps to install for this scenario, reference only.

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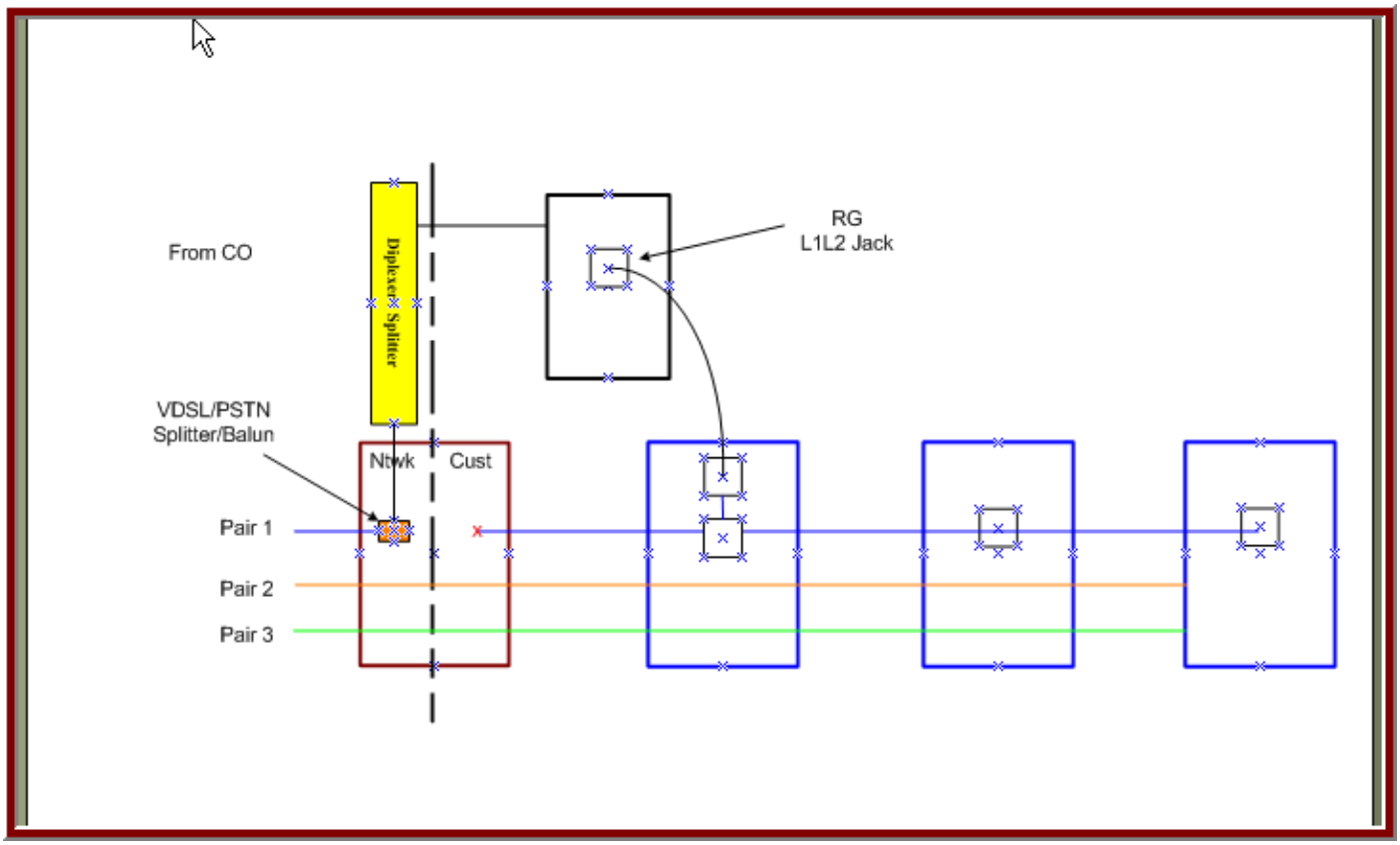
5.3. Scenario B – U-verse Voice set-up for SFU Premises Wiring in Daisy Chain

Figure 2: Scenario B



This diagram is to be used as a reference regarding the implementation for U-verse Voice where the Premises Wiring has been installed as “Daisy Chain”. (Wiring required for IPTV and/or HSIA is not shown.)

Steps to Install:

1. Check the LED indicators on the RG for VoIP and ensure that they are solid green. (see Reference 4)
2. Make an outbound test call from the L1L2 port of the RG using your hand set. If this fails or the indicators are not correct (see Reference 4), contact Tier 2 Support immediately. Do not proceed with the installation until these issues have been resolved.
3. At the NID locate the first jack in daisy chain. Remove the Premises Wire connection at the NID for the wire from the first phone in the daisy chain.

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4. At the first jack, replace the jack with a multi-port modular jack.

5. Install a new phone cord from the LIL2 port of the RG to and through one of the open ports in jack.

6. Connect the male end of the cord into a female receptacle, but do not connect it to the wall plate (The connection should end up inside the wall, thus eliminating the possibility of disconnecting the cord from the jack.).

7. Terminate the primary pair of the Premises Wire between the female receptacles on the dual port jack together. This connection will then provide phone service to the rest of the jacks in the Daisy Chain both upstream and downstream (the dual port jack can be located anywhere within the Daisy Chain)

8. Test all the appropriate jacks within the residence for the presence of U-verse Voice.

9. For installation regarding the HSIA and/or IPTV, refer to ATT-TELCO-IS-002-300-034.

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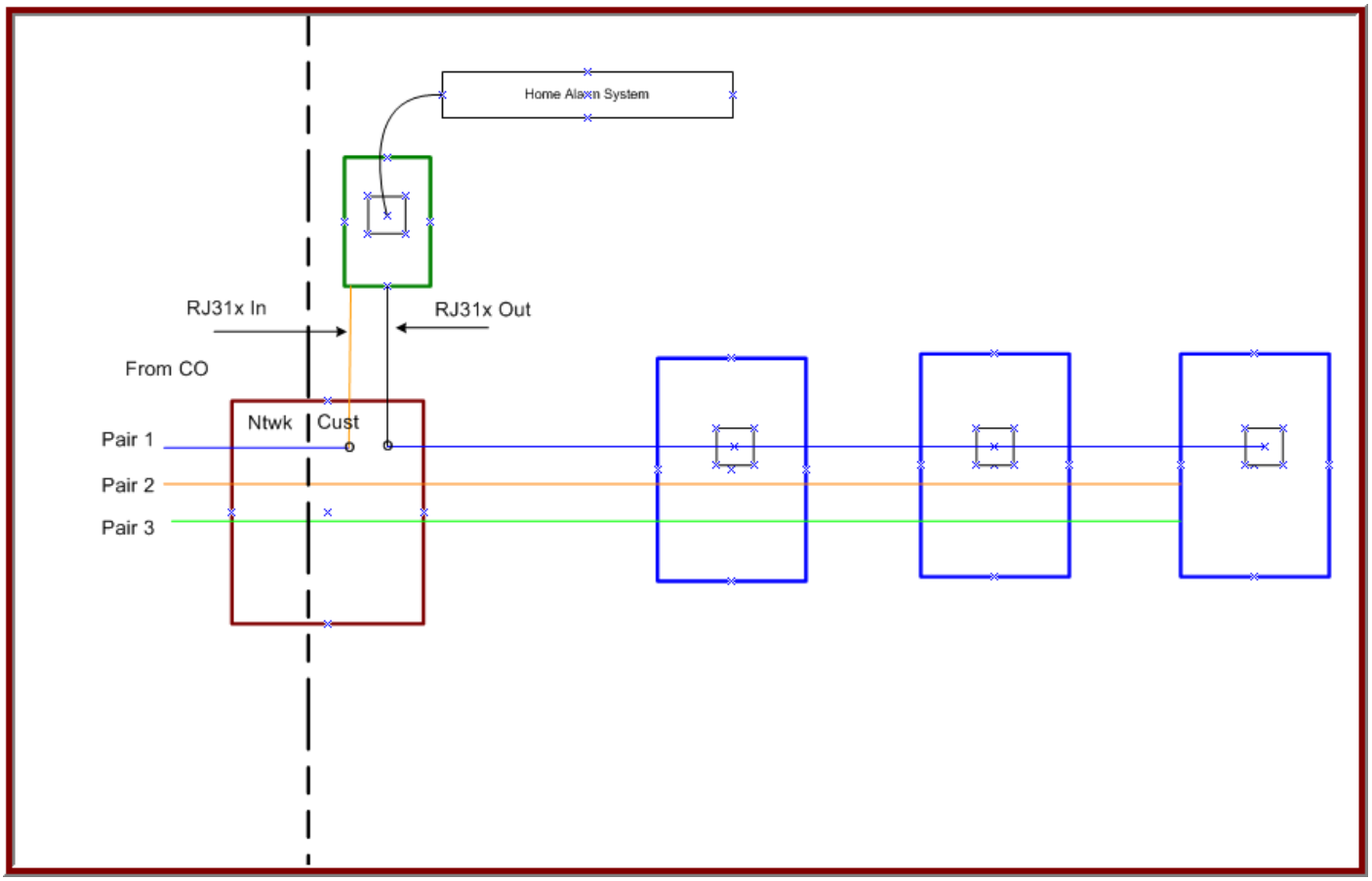
5.4. Scenario C - Existing POTS set-up for SFU Premises Wiring in Daisy Chain & Home Alarm

Figure 3: Scenario C



This diagram is to be used as a reference regarding the current implementation for POTS where the Premises Wiring has been installed as “Daisy Chain” and a Monitored Home Alarm is installed. There are not steps to install for this scenario, reference only.

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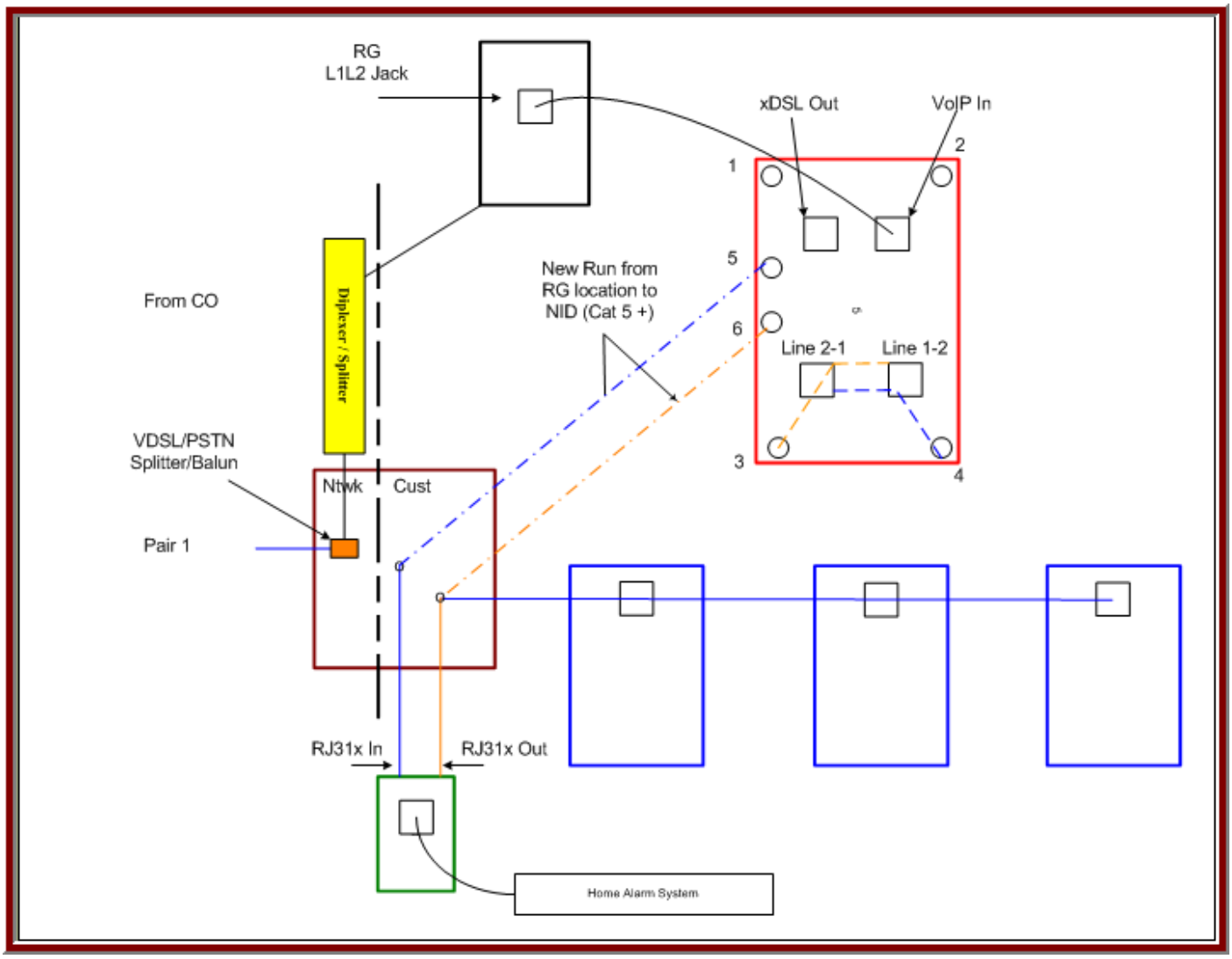
5.5. Scenario D - U-verse Voice set-up for SFU Premises Wiring in Daisy Chain, must install a new line from RG location to NID to ensure Home Alarm is First in line.

Figure 4: Scenario D



This diagram is to be used as a reference regarding the implementation for U-verse Voice where the Premises Wiring has been installed as “Daisy Chain” and a Monitored Home Alarm will be serviced by U-verse Voice. (Wiring required for IPTV and/or HSIA is not shown. Also, pair 2 & 3 from Central Office/Drop toward the Premises are not shown.)
Steps to Install:

Steps to Install:

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1. Check the LED indicators for VoIP on the RG and ensure that they are solid green. (see Reference 4)
2. Make an outbound test call from the L1L2 port of the RG using your hand set. If this fails or the indicators are not correct (see Reference 4), contact Tier 2 Support immediately. Do not proceed with the installation until these issues have been resolved.
3. Install a new Cat 5 cable from the NID to the location of the RG.

    A. Pair 1 of the newly installed cable will be used to deliver U-verse Voice to the Monitored Home Alarm.

        1. At the NID connect Pair 1 to the “In side” of the RJ31x
        2. At the Wall Plate Splitter/Filter connect Pair 1 to terminal posts 5. You must place the Alarm Present dip-switch setting to “Yes”.

    B. Pair 2 of the newly installed cable will be used to deliver U-verse Voice to the Wall Plate Splitter/Filter and the rest of the jacks within the living unit.

        1. At the NID connect Pair 2 to the “Out side” of the RJ31x as well the remaining jacks in the living unit.
        2. At the Wall Plate Splitter/Filter connect Pair 2 to terminal posts 6.

4. Install a new phone cord from the LIL2 port of the RG to the “VoIP In” port of the Wall Plate.
5. Connect the male end of the cord into a female receptacle, but do not connect it to the Wall Plate Splitter/Filter (The connection should end up inside the wall, thus eliminating the possibility of disconnecting the cord from the jack.).
6. Terminate the primary pair of the Cat 5 cable at the NID to the existing primary pair that feeds the RJ31x jack.
7. The secondary pair from the RJ31x jack back to the NID (should already be established). This connection will then provide phone service to the rest of the jacks in the home.
8. Test all the appropriate jacks within the residence for the presence of U-verse Voice.
9. For installation regarding the HSIA and/or IPTV, refer to ATT-TELCO-IS-002-300-034.

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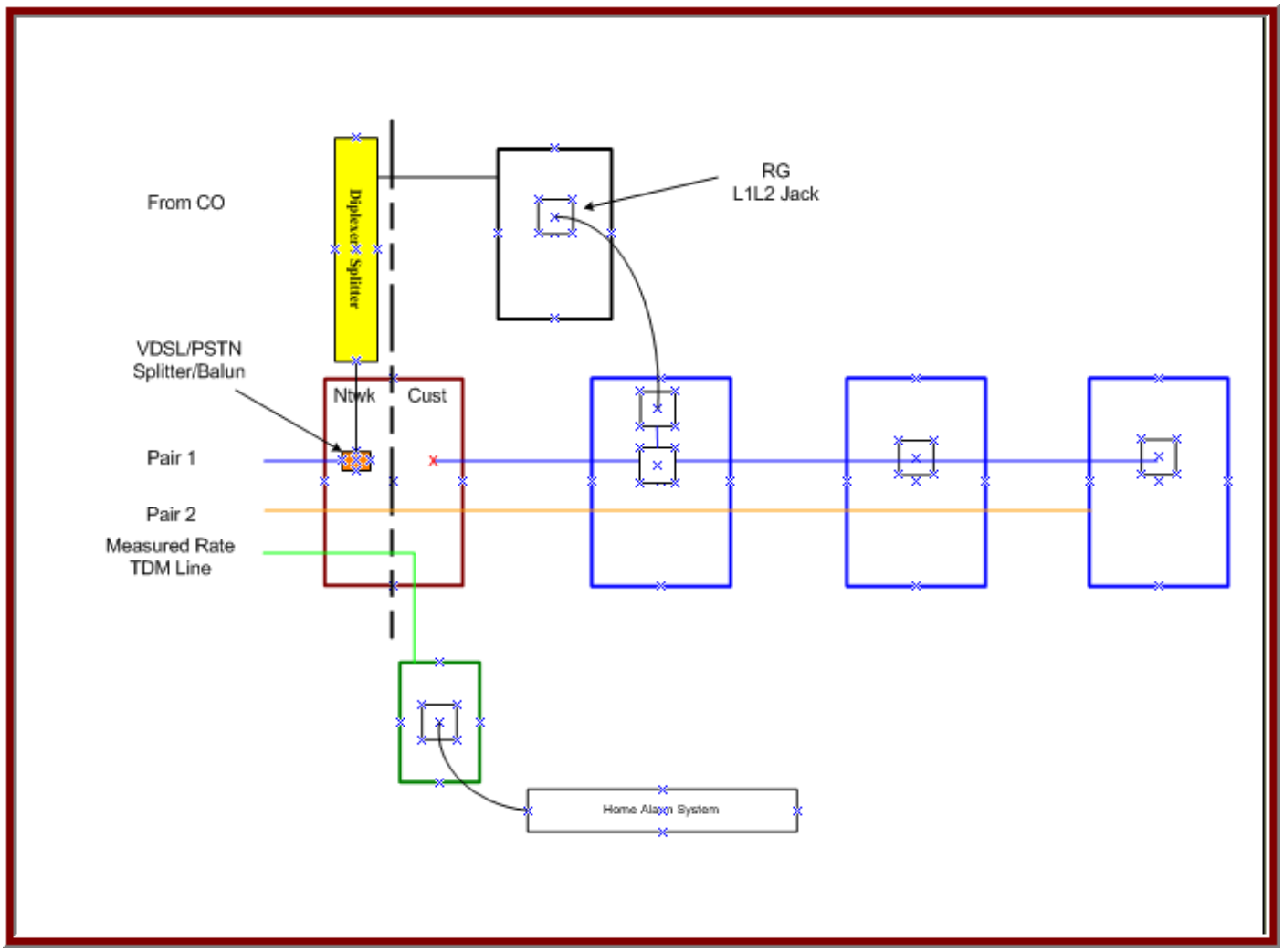
5.6. Scenario E – U-verse Voice set-up for SFU Premises Wiring in Daisy Chain & Home Alarm. Home Alarm is using Measured Rate TDM (MR TDM = POTS line with a special rate) for phone service.

Figure 5: Scenario E



This diagram is to be used as a reference regarding the implementation for U-verse Voice where the Premises Wiring has been installed as “Daisy Chain”. In addition the customer has requested or already has a Monitored Home Alarm serviced by a Measured Rate TDM (MRTDM) line. (Wiring required for IPTV and/or HSIA is not shown.)

Steps to Install:

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1. Check the LED indicators for VoIP on the RG and ensure that they are solid green. (see Reference 4)
2. Make an outbound test call from the L1L2 port of the RG using your hand set. If this fails or the indicators are not correct (see Reference 4), contact Tier 2 Support immediately. Do not proceed with the installation until these issues have been resolved.
3. The MRTDM line should have been installed prior to the installation of CVoIP. There is no work to perform for the Monitored Home Alarm in this scenario.
4. At the NID locate the first jack in daisy chain. Remove the Premises Wire connection at the NID for the wire from the first phone in the daisy chain.
5. At the first jack, replace the jack with a multi-port modular jack. .
6. Install a new phone cord from the LIL2 port of the RG to and through one of the open ports in jack.
7. Connect the male end of the cord into a female receptacle, but do not connect it to the wall plate (The connection should end up inside the wall, thus eliminating the possibility of disconnecting the cord from the jack.).
8. Terminate the primary pair of the Premises Wire between the female receptacles on the dual port jack together. This connection will then provide phone service to the rest of the jacks in the Daisy Chain both upstream and downstream (the dual port jack can be located anywhere within the series).
9. Test all the appropriate jacks within the residence for the presence of U-verse Voice.
10. For installation regarding the HSIA and/or IPTV, refer to ATT-TELCO-IS-002-300-034.

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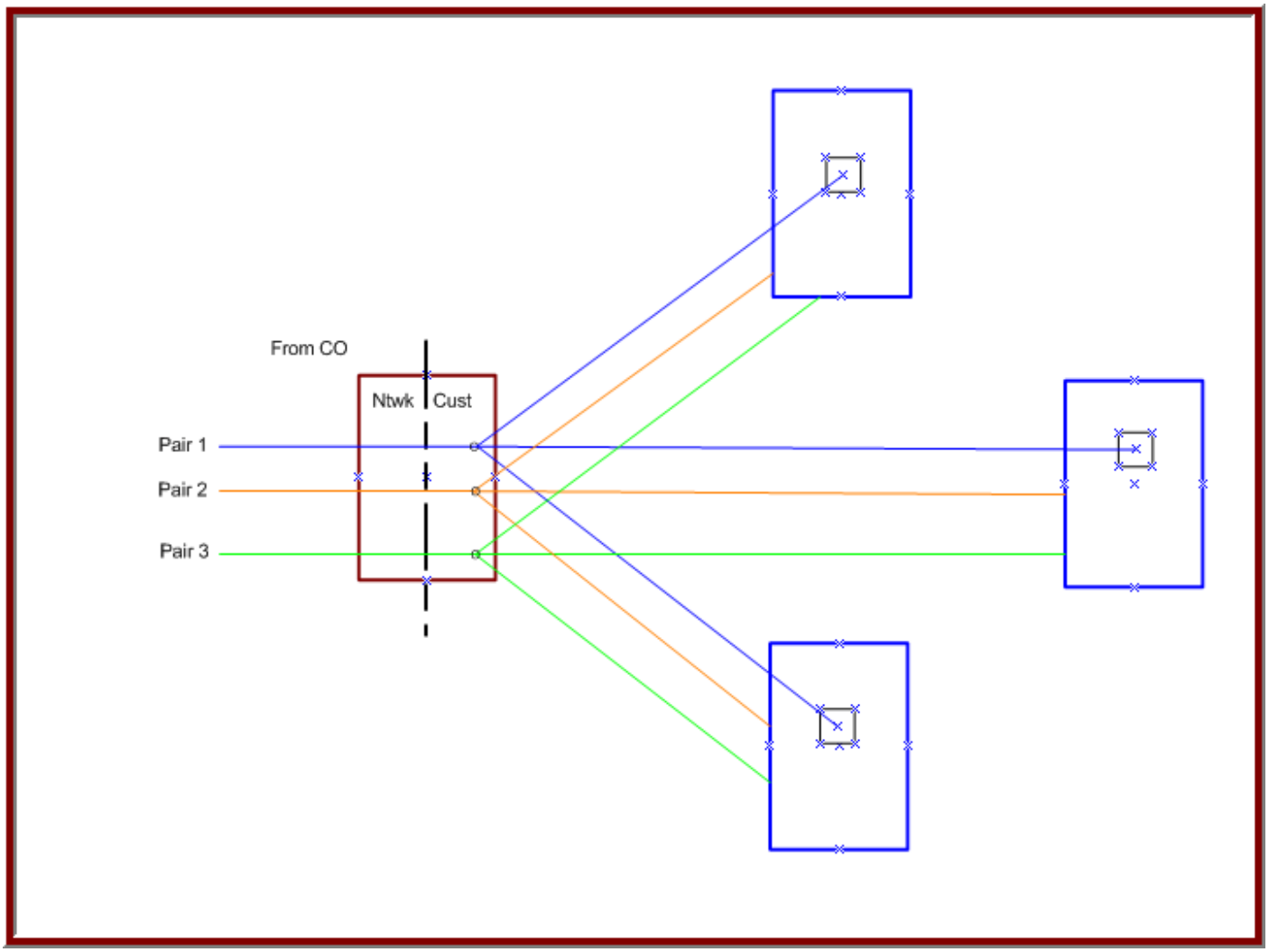
5.7. Scenario F - Existing POTS set-up for SFU Premises Wiring in "Home Run"

Figure 6: Scenario F



This diagram is to be used as a reference regarding the current implementation for POTS where the Premises Wiring has been installed as "Home Run". There are not steps to install for this scenario, reference only.

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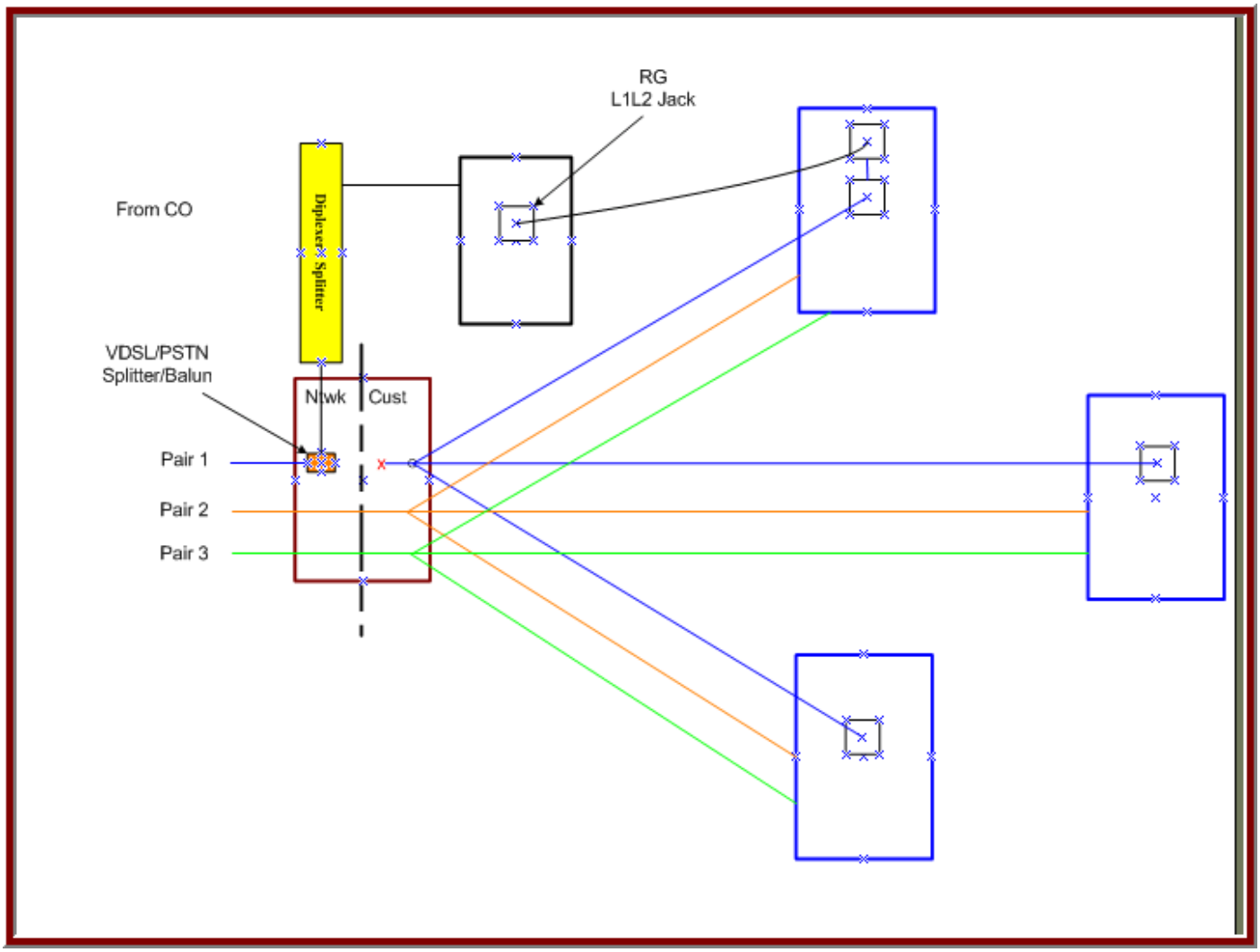
5.8. Scenario G – U-verse Voice set-up for SFU Premises Wiring in "Home Run"

Figure 7: Scenario G



This diagram is to be used as a reference regarding the implementation for U-verse Voice where the Premises Wiring has been installed as "Home Run". (Wiring required for IPTV and/or HSIA is not shown.)

Steps to Install:

1. Check the LED indicators for VoIP on the RG and ensure that they are solid green. (see Reference 4)

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2. Make an outbound test call from the L1L2 port of the RG using your hand set. If this fails or the indicators are not correct (see Reference 4), contact Tier 2 Support immediately. Do not proceed with the installation until these issues have been resolved.

3. At the NID locate the Premises Wiring termination point. Remove the Premises Wire connection at the NID toward the Central Office/Drop. Ensure that all Premises Wiring remains connected together

4. At the location of the RG find the jack that is to be used. Replace this jack with a multi-port modular jack.

5. Install a new phone cord from the LIL2 port of the RG to and through one of the open ports in jack.

6. Connect the male end of the cord into a female receptacle, but do not connect it to the wall plate (The connection should end up inside the wall, thus eliminating the possibility of disconnecting the cord from the jack.).

7. Terminate the primary pair of the Premises Wire between the female receptacles on the dual port jack together. This connection will then provide phone service to the rest of the jacks within the residence.

8. Test all the appropriate jacks within the residence for the presence of U-verse Voice.

9. For installation regarding the HSIA and/or IPTV, refer to ATT-TELCO-IS-002-300-034.

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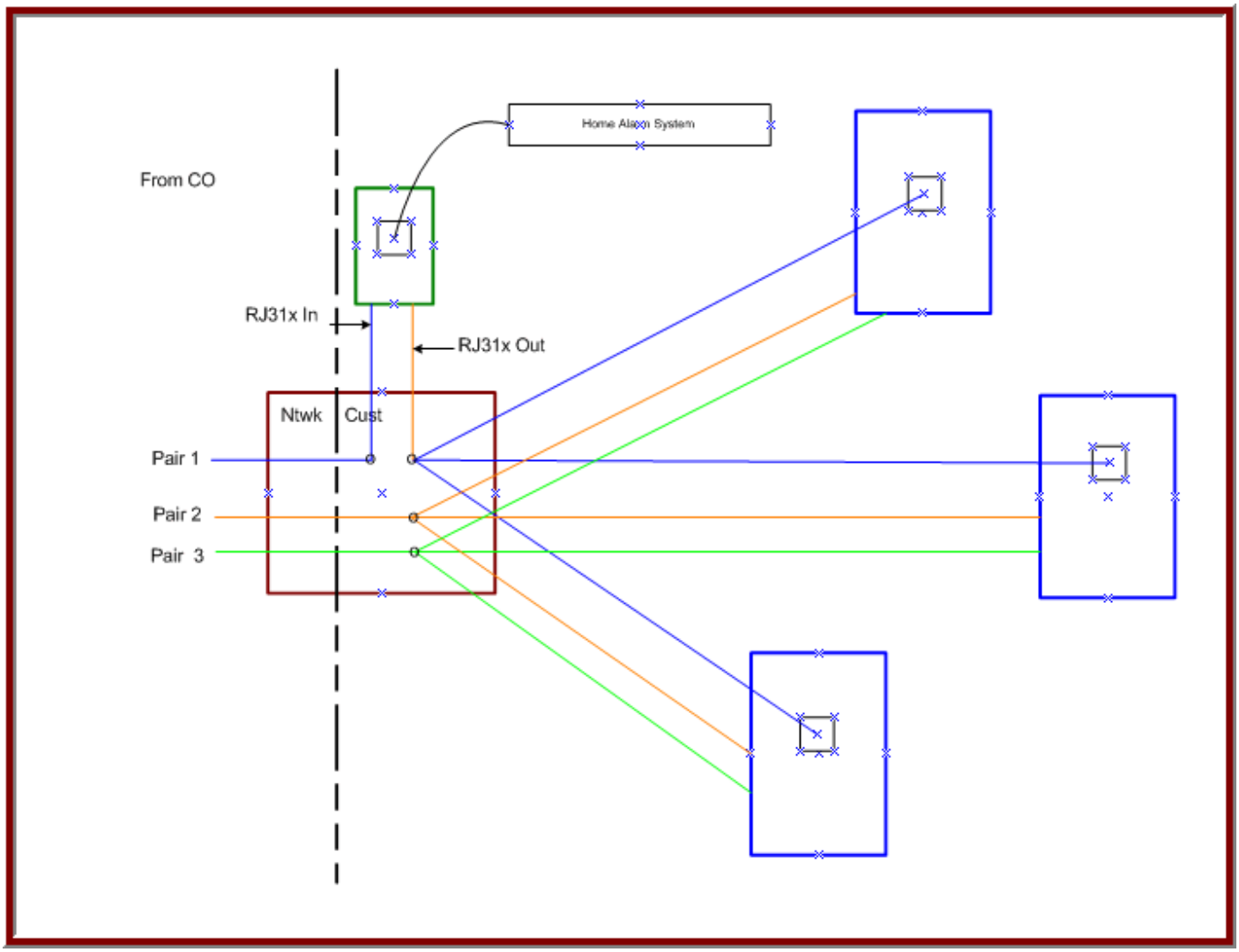
5.9. Scenario H - Existing POTS set-up for SFU Premises Wiring in "Home Run" & Home Alarm

Figure 8: Scenario H



This diagram is to be used as a reference regarding the current implementation for POTS where the Premises Wiring has been installed as "Home Run" and a Monitored Home Alarm is installed. There are not steps to install for this scenario, reference only.

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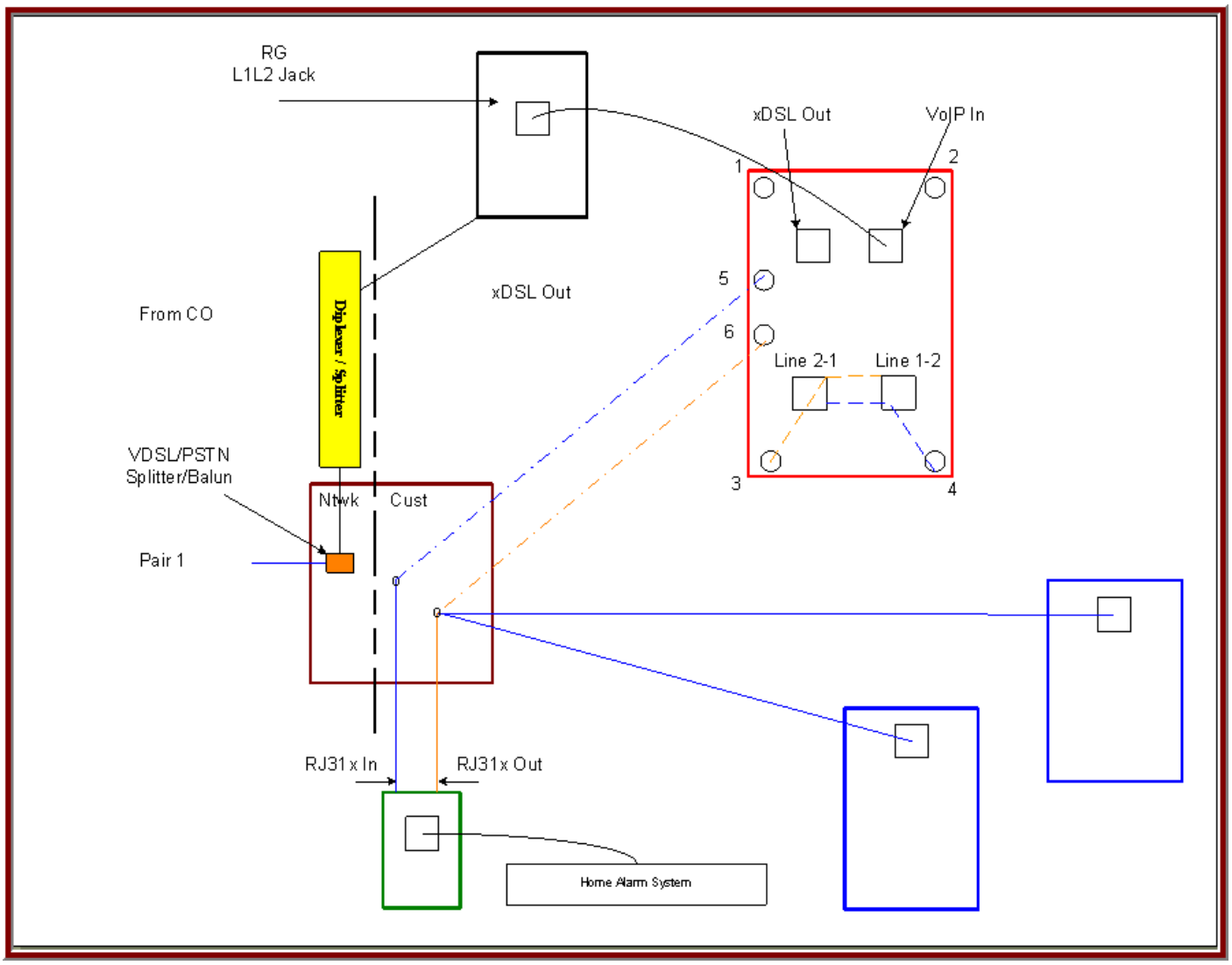
5.10. Scenario I - U-verse Voice set-up for SFU Premises Wiring in "Home Run", must install a new line from RG location to NID to ensure Home Alarm is First in line.

Figure 9: Scenario I



This diagram is to be used as a reference regarding the implementation for U-verse Voice where the Premises Wiring has been installed as "Home Run" and a Monitored Home Alarm will be serviced by U-verse Voice. (Wiring required for IPTV and/or HSIA is not shown. Also, pair 2 & 3 from Central Office/Drop toward the Premises are not shown.)

Steps to Install:

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1. Check the LED indicators for VoIP on the RG and ensure that they are solid green. (see Reference 4)

2. Make an outbound test call from the L1L2 port of the RG using your hand set. If this fails or the indicators are not correct (see Reference 4), contact Tier 2 Support immediately. Do not proceed with the installation until these issues have been resolved.

3. Install a new Cat 5 cable from the NID to the location of the RG.

   A. Pair 1 of the newly installed cable will be used to deliver U-verse Voice to the Monitored Home Alarm.

      1. At the NID connect Pair 1 to the “In side” of the RJ31x

      2. At the Wall Plate Splitter/Filter connect Pair 1 to terminal posts 5. You must place the Alarm Present dip-switch setting to “Yes”.

   B. Pair 2 of the newly installed cable will be used to deliver U-verse Voice to the Wall Plate Splitter/Filter and the rest of the jacks within the living unit.

      1. At the NID connect Pair 2 to the “Out side” of the RJ31x as well the remaining jacks in the living unit.

      2. At the Wall Plate Splitter/Filter connect Pair 2 to terminal posts 6.

4. Install a new phone cord from the LIL2 port of the RG to and through one of the open ports in jack.

5. Connect the male end of the cord into a female receptacle, but do not connect it to the Wall Plate Splitter/Filter (The connection should end up inside the wall, thus eliminating the possibility of disconnecting the cord from the jack.).

6. Terminate the primary pair of the Cat 5 cable at the NID to the existing primary pair that feeds the RJ31x jack. You must place the Alarm Present dip-switch setting to “Yes”.

7. The secondary pair from the RJ31x jack back to the NID (should already be established). This connection will then provide phone service to the rest of the jacks in the home.

8. Test all the appropriate jacks within the residence for the presence of U-verse Voice.

9. For installation regarding the HSIA and/or IPTV, refer to ATT-TELCO-IS-002-300-034.

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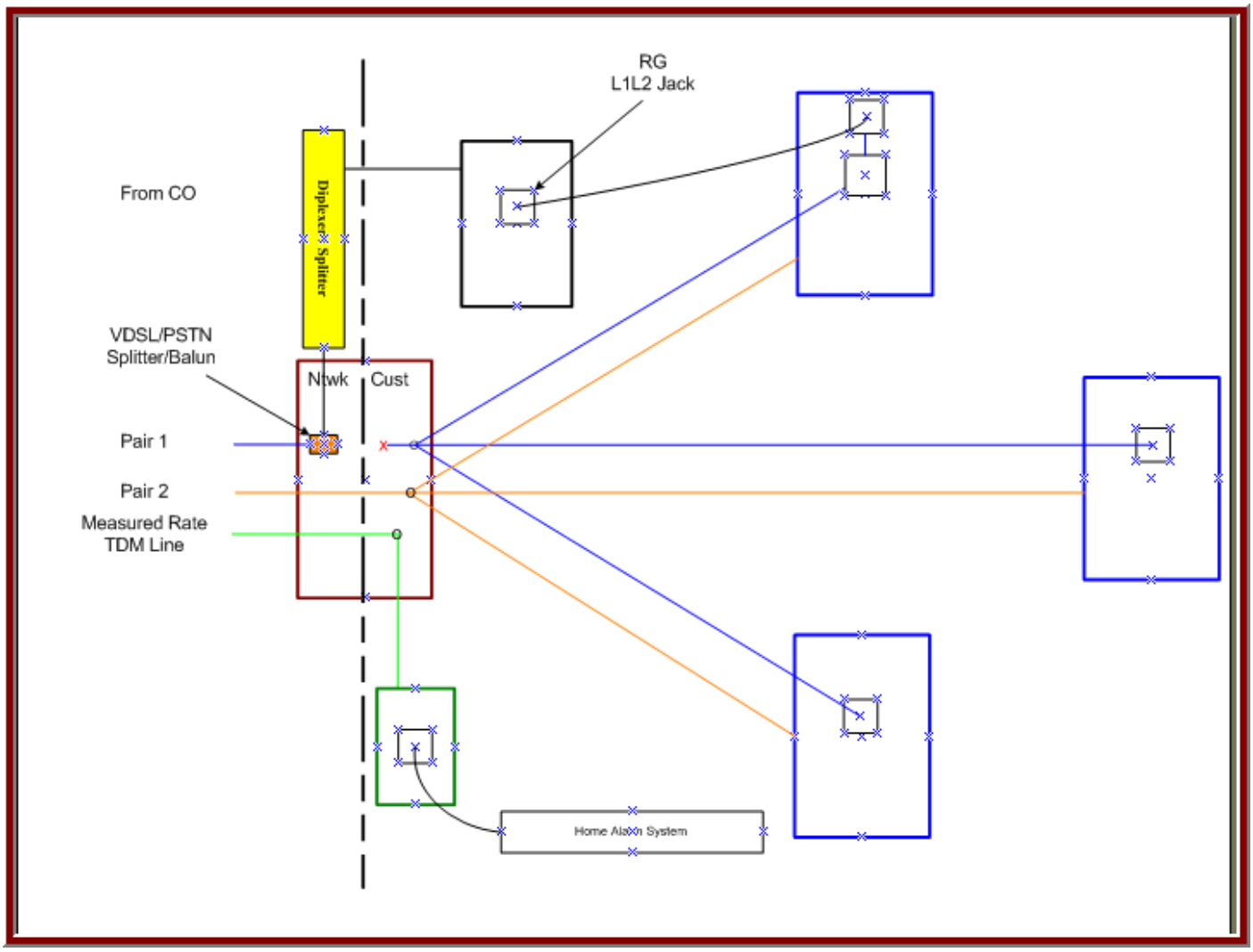
5.11. Scenario J – U-verse Voice set-up for SFU Premises Wiring in "Home Run" & Home Alarm. Home Alarm is using Measured Rate TDM (MR TDM = POTS line with a special rate) for phone service.

Figure 10: Scenario J



This diagram is to be used as a reference regarding the implementation for U-verse Voice where the Premises Wiring has been installed as "Home Run". In addition the customer has requested or already has their Monitored Home Alarm serviced by a MRTDM line. (Wiring required for IPTV and/or HSIA is not shown.)

Steps to Install:

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1. Check the LED indicators for VoIP on the RG and ensure that they are solid green. (see Reference 4)
2. Make an outbound test call from the L1L2 port of the RG using your hand set. If this fails or the indicators are not correct (see Reference 4), contact Tier 2 Support immediately. Do not proceed with the installation until these issues have been resolved.
3. The MRTDM line should have been installed prior to the installation of CVoIP. There is no work to perform for the Monitored Home Alarm in this scenario.
4. At the NID locate the Premises Wiring termination point. Remove the Premises Wire connection at the NID toward the Central Office/Drop. Ensure that all Premises Wiring remains connected together.
5. At the location of the RG find the jack that is to be used. Replace this jack with a multi-port modular jack.
6. Install a new phone cord from the LIL2 port of the RG to and through one of the open ports in jack.
7. Connect the male end of the cord into a female receptacle, but do not connect it to the wall plate (The connection should end up inside the wall, thus eliminating the possibility of disconnecting the cord from the jack.).
8. Terminate the primary pair of the Premises Wire between the female receptacles on the dual port jack together. This connection will then provide phone service to the rest of the jacks within the residence.
9. Test all the appropriate jacks within the residence for the presence of U-verse Voice.
10. For installation regarding the HSIA and/or IPTV, refer to ATT-TELCO-IS-002-300-034.

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6. Installation Section for Multi-Dwelling Units (MDUs)

This section outlines the scenarios that will be found within an MDU. MDU's come in a two variations, one being an Apartment (not owned by the resident) and the other would be considered a townhouse or condo (owned by the resident). This distinction is important to understand as there are limitations with regard to the Premises Wiring within an Apartment that are not applicable to a townhouse and/or condo. Within an Apartment, you may **not** run any premises wire without the permission of the building owner. Thus, you must meet the requirement found in Note 2 of this section and may **not** run any additional Premises Wiring within the living unit. Furthermore, it is not recommended that we have any exposed cords and/or wires of more that ten feet, it is simply not esthetically pleasing.

Therefore, for MDU's that are townhouse and/or condo, you may incorporate the scenarios found in the SFU and/or MDU section as appropriate.

6.1. Notes and Warnings

MDU Note 1: For all the Scenarios in this section the only thing that is depicted is the wiring related to the installation of U-verse Voice. All other wiring information regarding HSIA and IPTV can be found in APEx document ATT-TELCO-IS-002-300-034. Please use the Legend in this section for all wiring diagrams contained in same.

MDU Note 2: For MDU installations the Premises Wiring must be of CAT 3 caliber or better. If it is not, you must not install any U-verse services, must cancel the work order and notify the customer of any disqualifying requirement(s). See ATT-TELCO-IS-002-300-034 for U-verse order cancellation.

MDU Note 3: For any MDU installations where U-verse Voice is going to be added to current U-verse services, or replacing any other DSL type service, you must remove the PSTN Blocking Filters that may have been previously installed.

MDU Note 4: For the installation of U-verse Voice in conjunction with a Monitored Home Alarm, you must ensure that the “Service Outage Detect” parameter is turned on. See “Note 8” in Section 4.

MDU Note 5: Second U-verse Voice line is to be installed. The RG has multiplexed line 1 and line 2 at the L1L2 port of the RG. Therefore, line 1 will appear on the inner wires of the port and line 2 will appear on the outer pair of the port. As such, both lines will appear at the Wall Plate (“Reference 6”). On the Wall Plate you will find that line 1 and line 2 are found on the ports labeled Line1/2 and reversed at Line 2/1. Use these ports and premises wiring spare pairs to deliver the second line to remaining jacks within the living unit, when and where appropriate. If the installation is going to incorporate Monitored Home Alarms, intermediate jacks, and there are not enough premises wiring spare pairs to deliver the second line to the upstream intermediate jacks, you must notify the customer of this limitation. At this juncture you will be able to deliver the second line downstream from the Wall Plate to the remaining jacks in the living unit, provided the premises wiring spare pairs are available. Lastly, you will need to verify that the both lines appear at every location that they are intended to be delivered as well as follow the appropriate steps found in Sections 7& 8 for both lines.

MDU Note 6: For any work order that requires the setup for the addition of a Monitored Home Alarm after the installation of U-verse Voice has been completed, find the appropriate scenario from below. The appropriate scenario will be used to establish the wiring that will be needed in order to support the installation of the Monitored Home Alarm. The only difference is that the pair of Premises Wire that is to provide U-verse Voice to the Monitored Home Alarm and the

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pair of Premises Wire that is going to back-feed U-verse Voice to the living unit, will be connected together at the Demarc location within the living unit. You must ensure that any Premises Wiring required to support U-verse Voice at the remaining jacks within the living unit is complete at this time. Lastly, ensure the wiring at the Demarc is tagged accordingly. Tag the pair feeding the Monitored Home Alarm as “to Alarm” and the pair back-feeding U-verse Voice to the living unit as “from Alarm”. Do not forget to tag both pair as “U-verse Voice” & “Don't Remove”. Regarding the charges for this work you must refer to the Billing M&P, APEx Document # ATT-TELCO-IS-002-300-050

MDU Warning 1: Once all wiring has been completed, tag the U-verse Voice wiring with a quick-tie tag (preferably red) and write “U-verse Voice” on side of the tag and “Don’t Remove” on the other. This must be done at the RG connection, the jack location that is connected to the RG and at the NID (Demarc) where the premise wiring is connected. This must be done to ensure awareness of the U-verse Voice line and the associated implications to disconnecting the wiring. If any of these lines are disconnected the U-verse Voice service will not work and will impair Home Alarms if they are present.

MDU Warning 2: For the installation of U-verse Voice in the MDU scenarios it is important to note that there are two new pieces of equipment that will be used to deliver service. The first one is the Intermediate Jack and the second one is the Wall Plate Splitter/Filter. Either one of these devices can be used in either a wall mount phone (kitchen) or standard jack (non-wall mount phone). Furthermore, the Intermediate Jack may or may not be required depending on the location of the RG for those situations where the Premises Wiring has been installed as “Daisy Chain”. For the scenarios where the Premises Wiring has been installed as “Home Run”, there should not be a need for the Intermediate Jack. (see “References 1, 5 & 6”, Section 10) With the use of the Wall Plate Splitter/Filter, you must keep in mind that this device will **not** support a secondary line that is POTS, you must wire around it and/or use another jack as required.

MDU Warning 3: You must place the Alarm Present dip-switch setting to “Yes” for any installation where a Monitored Home Alarm is going to be used in conjunction with U-verse Voice. Subsequently, any installation aside from those scenarios listed above, then you must place the Alarm Present dip-switch setting to “No”.

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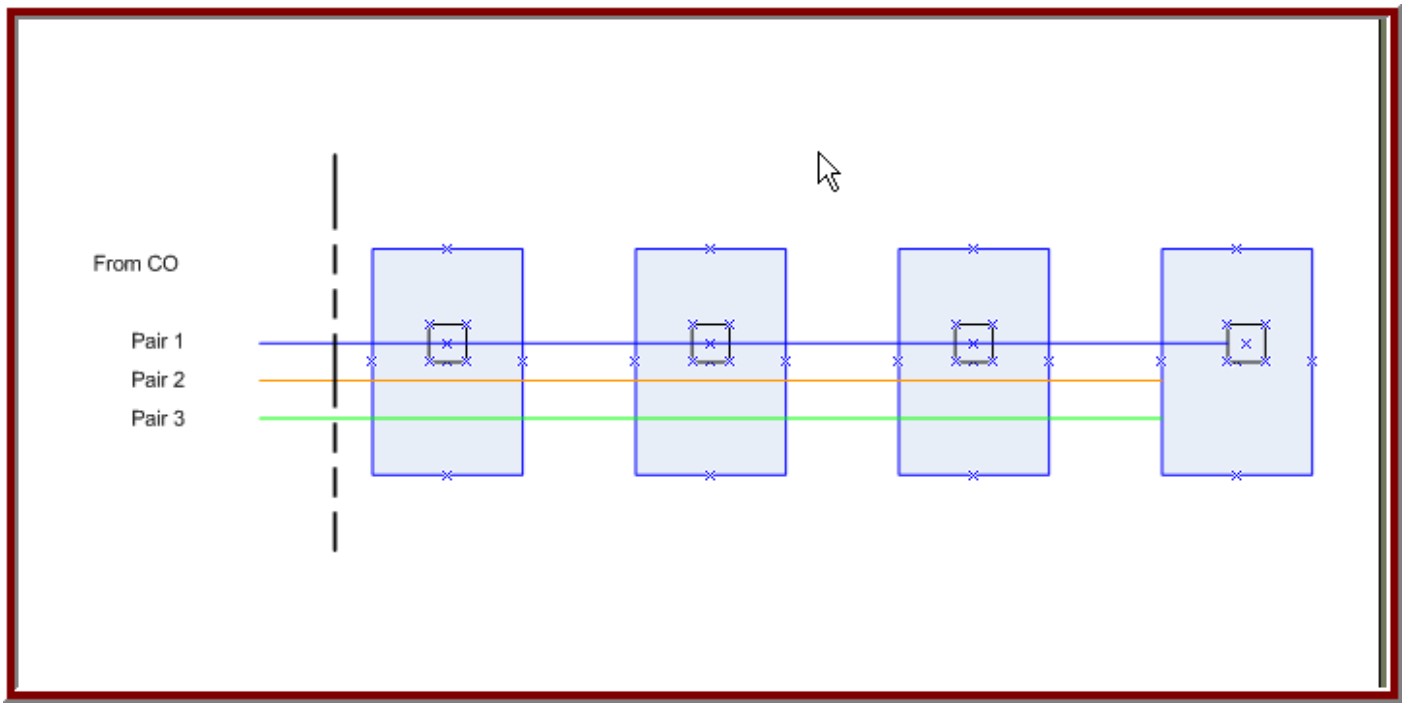
6.2. Scenario K - POTS set-up for MDU Premises Wiring in "Daisy Chain".

Figure 11: Scenario K



This diagram is to be used as a reference regarding the current implementation for POTS where the Premises Wiring has been installed as "Daisy Chain". There are not steps to install for this scenario, reference only.

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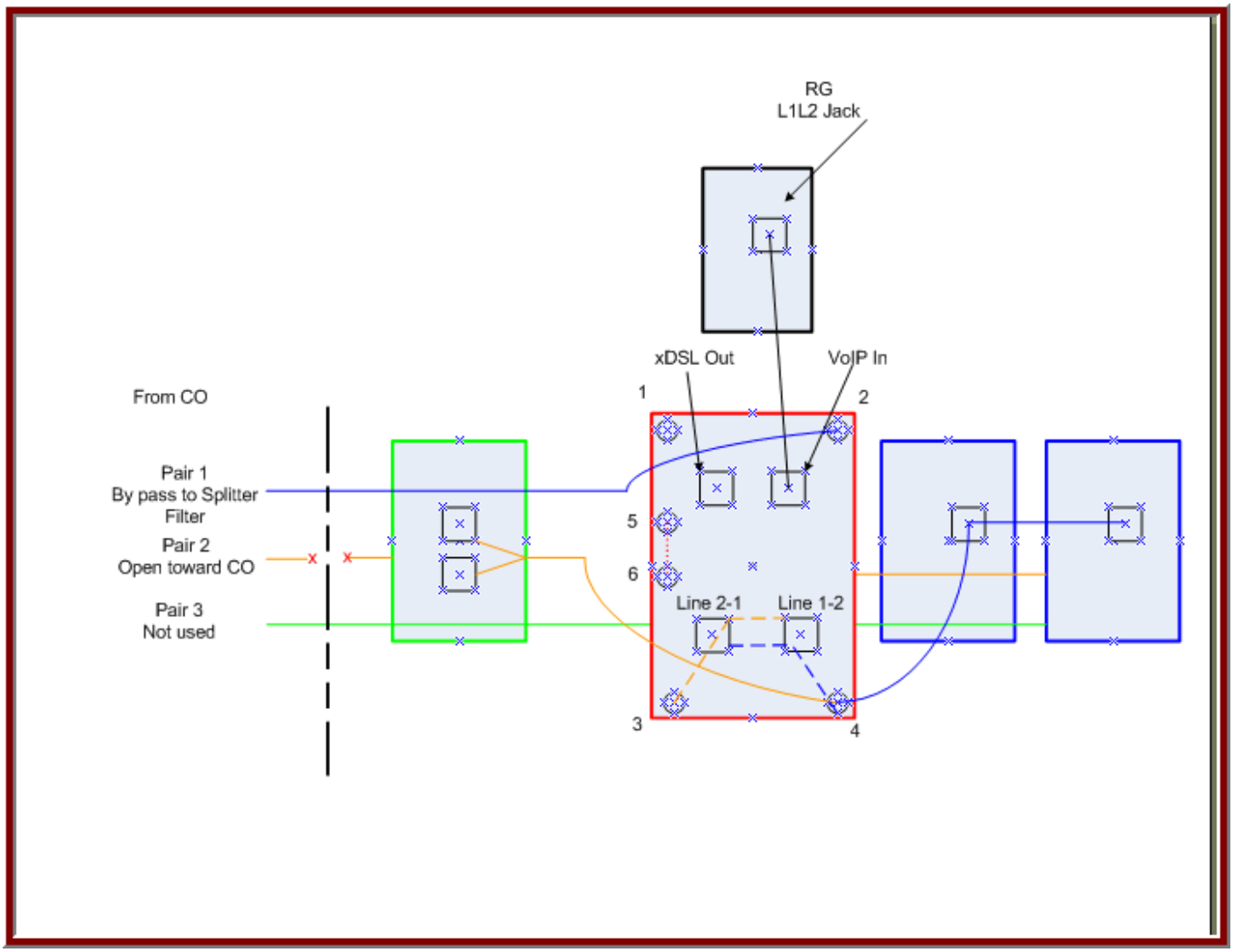
6.3. Scenario L - U-verse Voice set-up for MDU Premises Wiring in "Daisy Chain".

Figure 12: Scenario L



This diagram is to be used as a reference regarding the implementation for U-verse Voice where the Premises Wiring has been installed as "Daisy Chain". (In this scenario, the Intermediate Jack(s) are shown. The intermediate Jack may or may not be required depending on the location of the RG. Wiring required for IPTV and/or HSIA is not shown.)

Steps to Install:

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1. Identify location for RG

2. Check the LED indicators for VoIP on the RG and ensure that they are solid green. (see Reference 4)

3. Make an outbound test call from the L1L2 port of the RG using your hand set. If this fails or the indicators are not correct (see Reference 4), contact Tier 2 Support immediately. Do not proceed with the installation until these issues have been resolved.

4. Pull the local wall jack & sever wiring (one segment is toward CO, the other segment is toward the Premises. All jacks upstream toward CO will have dial tone present.).

5. Test all jacks in the living unit, and replace all “upstream” jacks with an Intermediate Jacks, if required.

6. Set Wall Plate Splitter/Filter & Intermediate Jack switches.

   A. For this installation, both switches at the Wall Plate Splitter/Filter should be set for VoIP.

   B. For this installation, at the Intermediate Jack the Jack Inner switch should be set for “bypass” and the Jack Outer switch should be set for “connect”.

7. Wiring for Pairs 1-3.

   A. Pair 1 will be used to deliver the U-verse service from the CO to the Wall Plate Splitter/Filter.

      1. At the Intermediate Jack (s) connect Pair 1 to terminal posts number 2. Then run a jumper to terminal posts number 4. This will allow for the signal to proceed and terminate to the input of the Splitter/Filter found on the Wall Plate Splitter/Filter without any interference.

      2. At the Wall Plate Splitter/Filter connect Pair 1 coming from the Intermediate Jack to terminal posts number 2. These terminal posts feed the inward side of the Splitter-Filter.

   B. Pair 2 will be used to deliver U-verse Voice toward any “upstream” jacks.

      1. Disconnect Pair 2 from the Center Office/Drop side of the demarc.

      2. At the Intermediate Jack (s), connect Pair 2 to terminal posts number 3. Connect a jumper wire from terminal posts number 3 to terminal posts number 1. (this will activate the Intermediate Jacks with the U-verse Voice) . Also ensure that Pair 2 is disconnected at terminal posts number 1 of Jack #1 (toward demarc), the jumper wire needs to be installed only at this position.

      3. At the Wall Plate Splitter/Filter connect Pair 2 to terminal posts number 4. Then connect the remaining “downstream” jacks using their Pair 1 (should not have been disturbed) to the same terminal posts. U-verse Voice will now appear on the outer pair of the Line 2 port as well as the remain jacks within the living unit.

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C. Pair 3 is not used.

D. Wall Plate Splitter/Filter Other

1. For this scenario you must place the Alarm Present dip-switch setting to “No”.

2. Connect the remaining “downstream” jacks using their Pair 1 (should not have been disturbed) to the same terminal posts. U-verse Voice will now appear on the outer pair of the Line 2 port as well as the remain jacks within the living unit.

8. Install a new phone cord from the LIL2 port of the RG to “From RG for VoIP” port on the Wall Plate Splitter/Filter.

9. Test all the appropriate jacks within the residence for the presence of U-verse Voice.

10. For installation regarding the HSIA and/or IPTV, refer to ATT-TELCO-IS-002-300-034.

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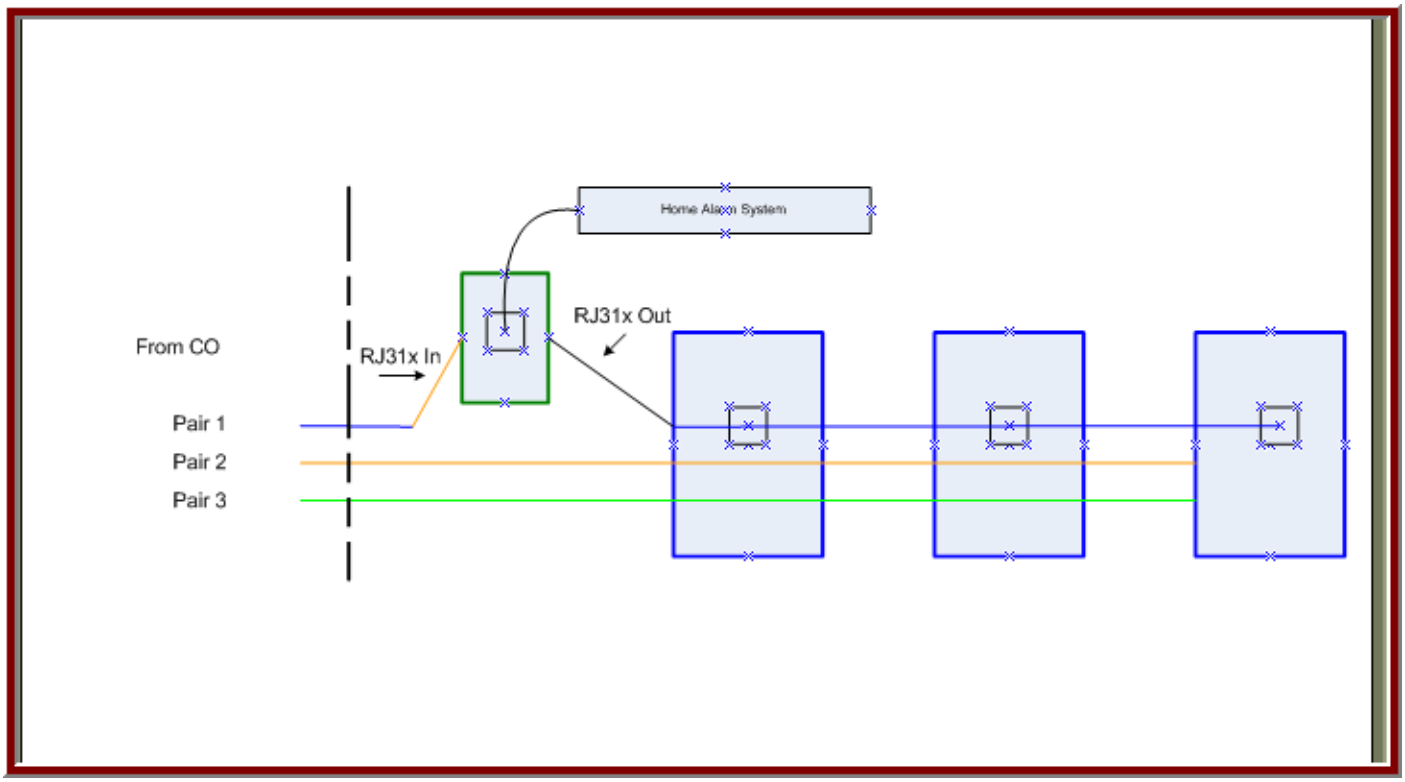
6.4. Scenario M - POTS set-up for MDU Premises Wiring as "Daisy Chain" with a Monitored Home Alarm located within the living unit.

Figure 13: Scenario M



This diagram is to be used as a reference regarding the current implementation for POTS where the Premises Wiring has been installed as "Daisy Chain" and there is a Monitored Home Alarm located within the unit. There are not steps to install for this scenario, reference only.

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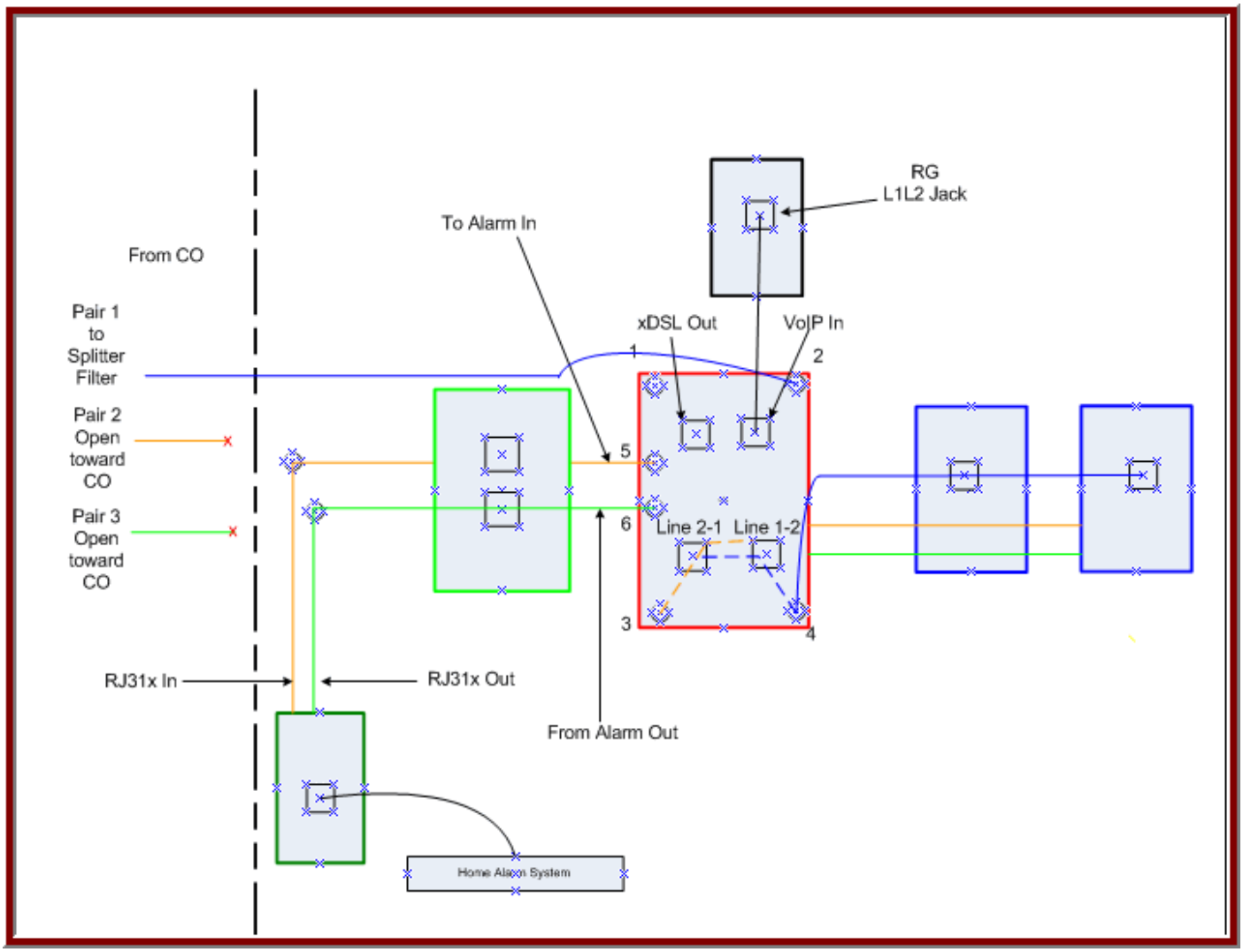
6.5. Scenario N - U-verse Voice set-up for MDU Premises Wiring as "Daisy Chain" with a Monitored Home Alarm located within the living unit.

Figure 14: Scenario N



This diagram is to be used as a reference regarding the implementation for U-verse Voice where the Premises Wiring has been installed as "Daisy Chain" and there is a Monitored Home Alarm located within the unit. (In this scenario, the Intermediate Jack(s) are shown. The intermediate Jack may or may not be required depending on the location of the RG. Wiring required for IPTV and/or HSIA is not shown.)

Steps to Install:

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1. Identify location for RG

2. Check the LED indicators for VoIP on the RG and ensure that they are solid green. (see Reference 4)

3. Make an outbound test call from the L1L2 port of the RG using your hand set. If this fails or the indicators are not correct (see Reference 4), contact Tier 2 Support immediately. Do not proceed with the installation until these issues have been resolved.

4. Pull the local wall jack & sever wiring (one segment is toward CO, the other segment is toward the Premises. All jacks upstream toward CO will have dial tone present.).

5. Test all jacks in the living unit, and replace all “upstream” jacks with an Intermediate Jacks, if required.

6. Set Wall Plate Splitter/Filter & Intermediate Jack switches.

    A. For this installation, both switches at the Wall Plate Splitter/Filter should be set for VoIP.

    B. For this installation, at the Intermediate Jack the Jack Inner switch should be set for “bypass” and the Jack Outer switch should be set for “connect”.

7. Wiring for Pairs 1-3.

    A. Pair 1 will be used to deliver the U-verse service from the CO to the Wall Plate Splitter/Filter.

        1. At the Intermediate Jack (s) connect Pair 1 coming from the NID to terminal posts number 2. The run a jumper to terminal posts number 4. This will allow for the signal to proceed and terminate to the input of the Splitter/Filter found on the Wall Plate Splitter/Filter without any interference.

        2. At the Wall Plate Splitter/Filter connect Pair 1 coming from the Intermediate Jack to terminal posts number 2. These terminal posts feed the inward side of the Splitter-Filter.

    B. Pair 2 will be used to deliver U-verse Voice to the Monitored Home Alarm. You must place the Alarm Present dip-switch setting to “Yes”.

        1. At the Demarc disconnect Pair 2 from the Center Office/Drop. On the customer side of the Demarc, connect Pair 2 to the Input of the RJ31x.

        2. At the Intermediate Jack (s), do not connect Pair 2 to any terminal posts. This needs to be a clean run through the Intermediate Jack(s) (terminating only to the Input of the RJ31x).

        3. At the Wall Plate Splitter/Filter connect Pair 2 coming from the last Intermediate Jack toward the Wall Plate Splitter/Filter to terminal posts number 5.

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C. Pair 3 will be used to deliver U-verse Voice back toward the Intermediate Jacks and the rest of downstream jacks from the Wall Plate Splitter/Filter.

1. At the Demarc disconnect Pair 3 from the Center Office/Drop. On the customer side of the Demarc, connect Pair 3 to the Output of the RJ31x.

2. At the Intermediate Jack (s) connect Pair 3 coming from the Demarc to terminal posts number 1. Then connect a jumper from terminal posts 1 to terminal posts 3. Connect Pair 3 leaving the Intermediate Jack going toward the Wall Plate Splitter/Filter (or next Intermediate Jack) to terminal posts number 3. This needs to be a clean run through the Intermediate Jack(s) (terminating only to the Input of the RJ31x)

3. At the Wall Plate Splitter/Filter connect Pair 3 coming from the last Intermediate Jack toward the Wall Plate Splitter/Filter to terminal posts number 6.

D. Wall Plate Splitter/Filter Other

1. For this scenario you must NOT connect a jumper wire between terminal posts 5 & 6.

2. You also must connect the remaining “downstream” jacks using their Pair 1 (should not have been disturbed) to terminal posts number 4. U-verse Voice will now appear on the outer pair of the Line 2 port as well as the remain jacks within the living unit.

8. Install a new phone cord from the LIL2 port of the RG to “From RG for VoIP” port on the Wall Plate Splitter/Filter.

9. Test all the appropriate jacks within the residence for the presence of U-verse Voice.

10. For installation regarding the HSIA and/or IPTV, refer to ATT-TELCO-IS-002-300-034.

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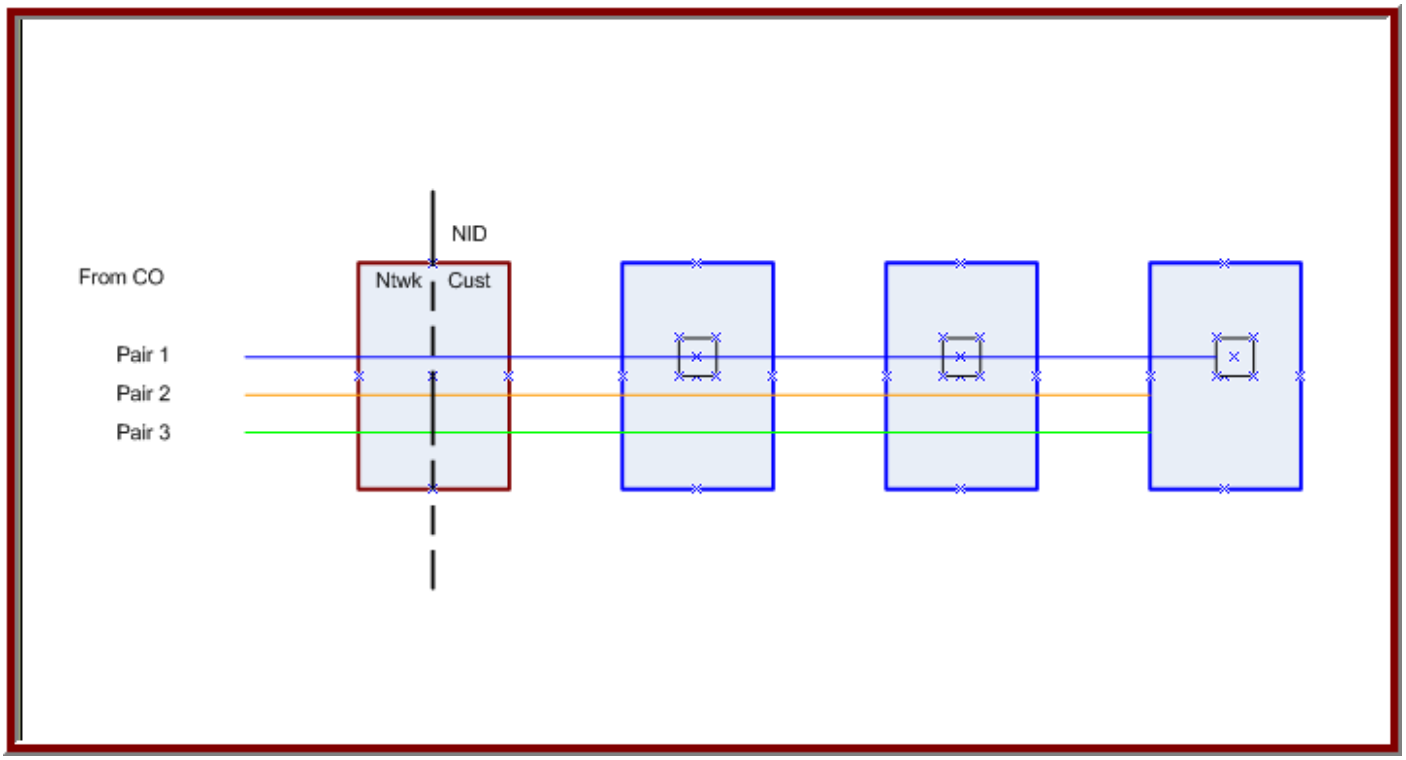
6.6. Scenario 0 – POTS set-up for MDU Premises Wiring as "Daisy Chain" with a NID or SNI located within the Scenario 0 – POTS set-up for MDU Premises Wiring as "Daisy Chain" with a NID or SNI located within the living unit. living unit.

Figure 15: Scenario O



This diagram is to be used as a reference regarding the current implementation for POTS where the Premises Wiring has been installed as "Daisy Chain" and there is a NID and/or SNI located within the unit. There are not steps to install for this scenario, reference only.

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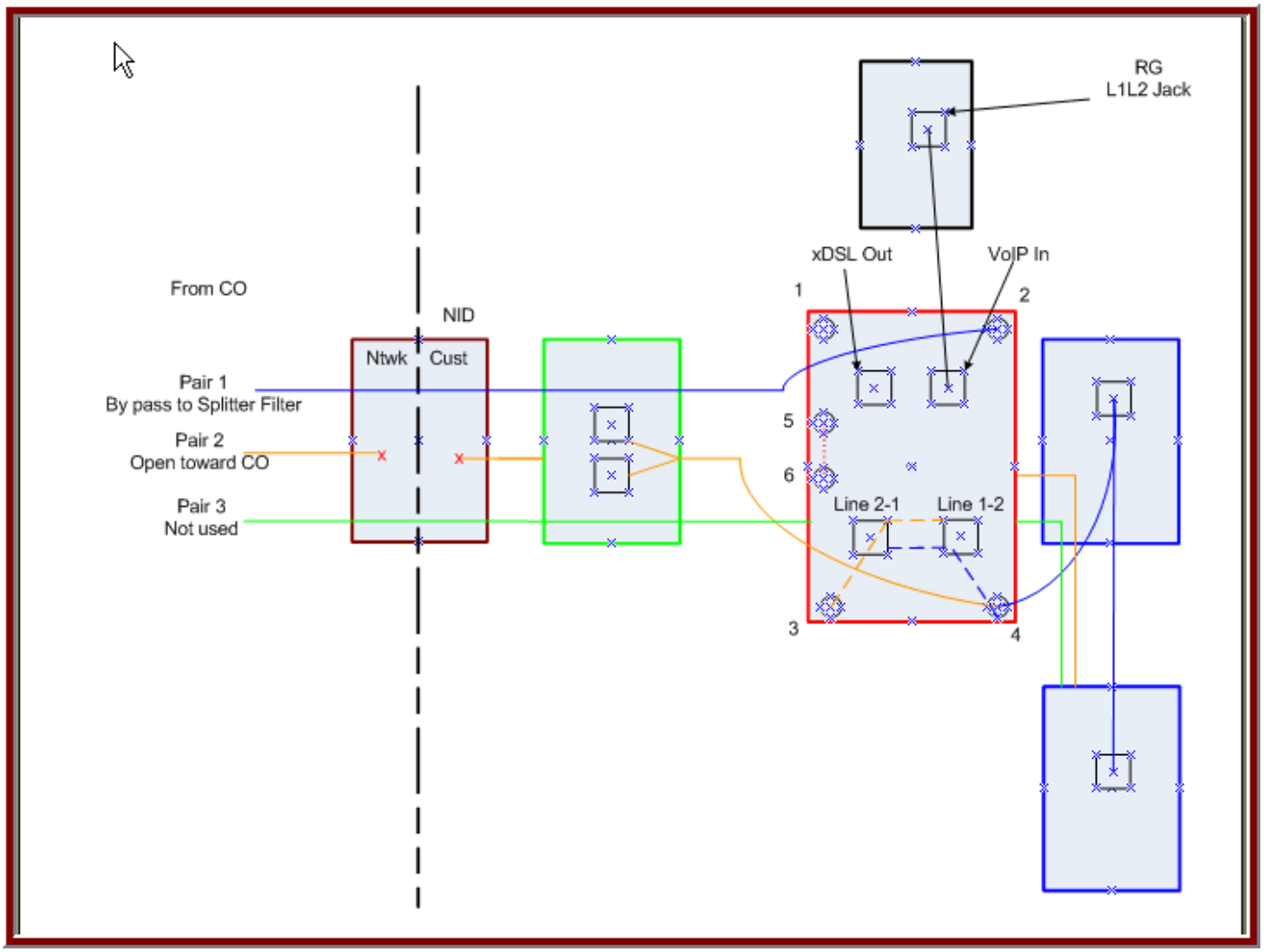
6.7. Scenario P – U-verse Voice set-up for MDU Premises Wiring as "Daisy Chain" with a NID or SNI located within the living unit.

Figure 16: Scenario P



This diagram is to be used as a reference regarding the implementation for U-verse Voice where the Premises Wiring has been installed as "Daisy Chain" and there is a NID and/or SNI located within the unit. (In this scenario, the Intermediate Jack(s) are shown. The intermediate Jack may or may not be required depending on the location of the RG. Wiring required for IPTV and/or HSIA is not shown.)

Steps to Install:

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1. Identify location for RG

2. Check the LED indicators for VoIP on the RG and ensure that they are solid green. (see Reference 4)

3. Make an outbound test call from the L1L2 port of the RG using your hand set. If this fails or the indicators are not correct (see Reference 4), contact Tier 2 Support immediately. Do not proceed with the installation until these issues have been resolved.

4. Pull the local wall jack & sever wiring (one segment is toward CO, the other segment is toward the Premises. All jacks upstream toward CO will have dial tone present.).

5. Test all jacks in the living unit, and replace all “upstream” jacks with an Intermediate Jacks, if required.

6. Set Wall Plate Splitter/Filter & Intermediate Jack switches.

   A. For this installation, both switches at the Wall Plate Splitter/Filter should be set for VoIP.

   B. For this installation, at the Intermediate Jack the Jack Inner switch should be set for “bypass” and the Jack Outer switch should be set for “connect”.

7. Wiring for Pairs 1-3.

   A. Pair 1 will be used to deliver the U-verse service from the CO to the Wall Plate Splitter/Filter.

      1. At the Intermediate Jack (s) connect Pair 1 coming from the NID to terminal posts number 2. The run a jumper to terminal posts number 4. This will allow for the signal to proceed and terminate to the input of the Splitter/Filter found on the Wall Plate Splitter/Filter without any interference.

      2. At the Wall Plate Splitter/Filter connect Pair 1 coming from the Intermediate Jack to terminal posts number 2. These terminal posts feed the inward side of the Splitter-Filter.

   B. Pair 2 will be used to deliver U-verse Voice to any back toward any “upstream” jacks.

      1. At the NID disconnect Pair 2 from the Center Office/Drop side of the demarc.

      2. At the Intermediate Jack (s), connect Pair 2 to terminal posts number 3. Connect a jumper wire from terminal posts number 3 to terminal posts number 1. (this will activate the Intermediate Jacks with the U-verse Voice) . Also ensure that Pair 2 is disconnected at terminal posts number on of Jack #1 (toward demarc), the jumper wire needs to be installed only at this position.

      3. At the Wall Plate Splitter/Filter connect Pair 2 to terminal posts number 4. Then connect the remaining “downstream” jacks using their Pair 1 (should not have been disturbed) to the same terminal posts. U-verse Voice will now appear on the outer pair of the Line 2 port as well as the remain jacks within the living unit.

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C. Pair 3 is not used.

D. Wall Plate Splitter/Filter Other

1. For this scenario you must place the Alarm Present dip-switch setting to “No”.

2. Connect the remaining “downstream” jacks using their Pair 1 (should not have been disturbed) to the same terminal posts. U-verse Voice will now appear on the outer pair of the Line 2 port as well as the remain jacks within the living unit.

8. Install a new phone cord from the LIL2 port of the RG to “From RG for VoIP” port on the Wall Plate Splitter/Filter.

9. Test all the appropriate jacks within the residence for the presence of U-verse Voice.

10. For installation regarding the HSIA and/or IPTV, refer to ATT-TELCO-IS-002-300-034.

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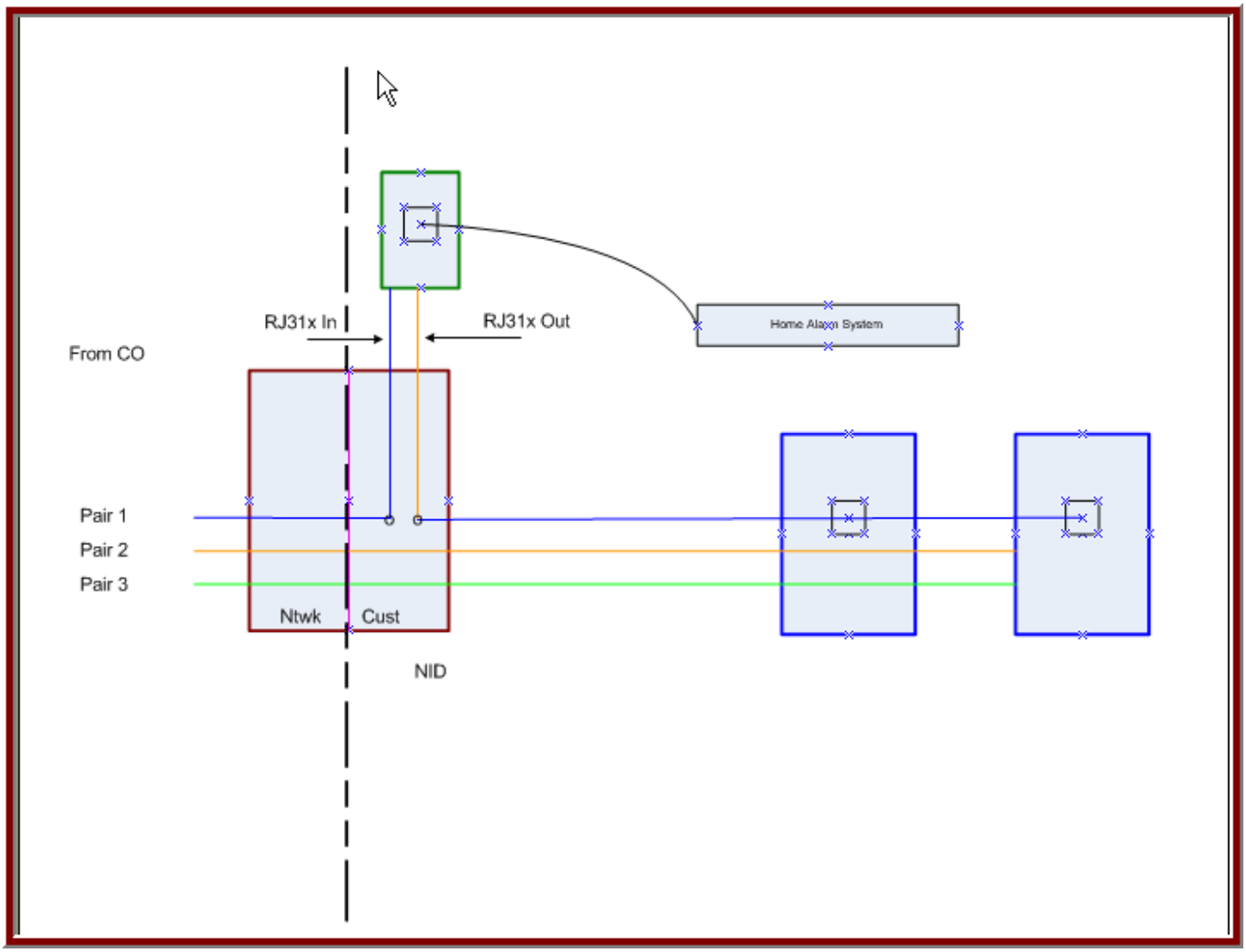
6.8. Scenario Q – POTS set-up for MDU Premises Wiring as "Daisy Chain" with a NID or SNI located within the living unit as well as a Monitored Home Alarm.

Figure 17: Scenario Q



This diagram is to be used as a reference regarding the current implementation for POTS where the Premises Wiring has been installed as "Daisy Chain" and there is a NID and/or SNI located within the unit as well as a Monitored Home Alarm. There are not steps to install for this scenario, reference only.

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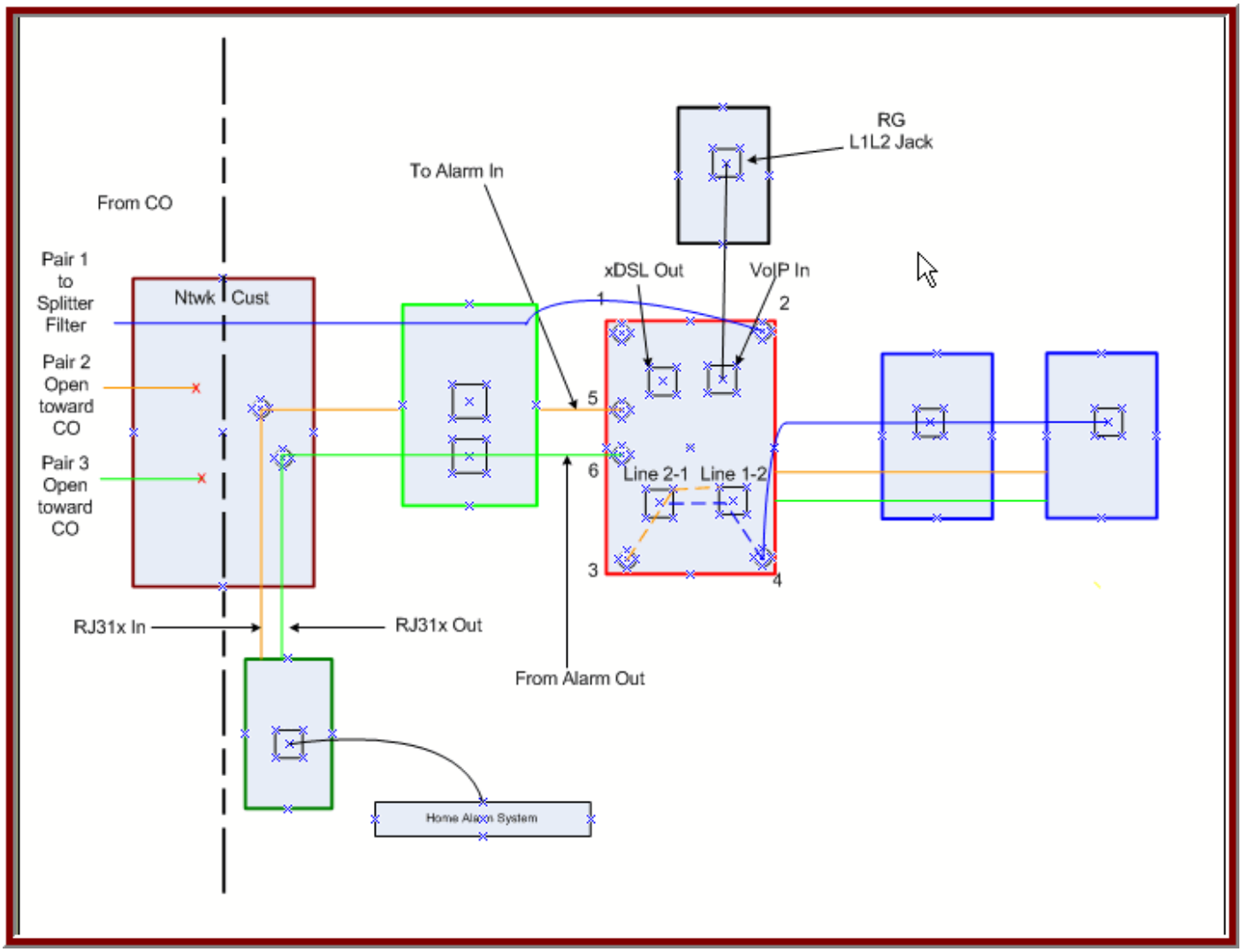
6.9. Scenario R – U-verse Voice set-up for MDU Premises Wiring as "Daisy Chain" with a NID or SNI located within the living unit as well as a Monitored Home Alarm.

Figure 18: Scenario R



This diagram is to be used as a reference regarding the implementation for U-verse Voice where the Premises Wiring has been installed as "Daisy Chain" and there is a NID and/or SNI as well as a Monitored Home Alarm located within the unit. (In this scenario, the Intermediate Jack(s) are shown. The intermediate Jack may or may not be required depending on the location of the RG. Wiring required for IPTV and/or HSIA is not shown.)

Steps to Install:

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1. Identify location for RG

2. Check the LED indicators for VoIP on the RG and ensure that they are solid green. (see Reference 4)

3. Make an outbound test call from the L1L2 port of the RG using your hand set. If this fails or the indicators are not correct (see Reference 4), contact Tier 2 Support immediately. Do not proceed with the installation until these issues have been resolved.

4. Pull the local wall jack & sever wiring (one segment is toward CO, the other segment is toward the Premises. All jacks upstream toward CO will have dial tone present.).

5. Test all jacks in the living unit, and replace all “upstream” jacks with an Intermediate Jacks, if required.

6. Set Wall Plate Splitter/Filter & Intermediate Jack switches.

   A. For this installation, both switches at the Wall Plate Splitter/Filter should be set for VoIP.

   B. For this installation, at the Intermediate Jack the Jack Inner switch should be set for “bypass” and the Jack Outer switch should be set for “connect”.

7. Wiring for Pairs 1-3.

   A. Pair 1 will be used to deliver the U-verse service from the CO to the Wall Plate Splitter/Filter. You must place the Alarm Present dip-switch setting to “Yes”.

      1. At the Intermediate Jack (s) connect Pair 1 to terminal posts number 2. The run a jumper to terminal posts number 4. This will allow for the signal to proceed and terminate to the input of the Splitter/Filter found on the Wall Plate Splitter/Filter without any interference.

      2. At the Wall Plate Splitter/Filter connect Pair 1 coming from the Intermediate Jack to terminal posts number 2. These terminal posts feed the inward side of the Splitter-Filter.

   B. Pair 2 will be used to deliver U-verse Voice to the Monitored Home Alarm.

      1. At the NID disconnect Pair 2 from the Center Office/Drop side of the demarc. On the customer side of the NID, connect Pair 2 to the Input of the RJ31x at the NID.

      2. At the Intermediate Jack (s), do not connect Pair 2 to any terminal posts. This needs to be a clean run through the Intermediate Jack(s) (terminating only to the Input of the RJ31x at the NID).

      3. At the Wall Plate Splitter/Filter connect Pair 2 coming from the last Intermediate Jack toward the Wall Plate Splitter/Filter to terminal posts number 5.

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C. Pair 3 will be used to deliver U-verse Voice back toward the Intermediate Jacks and the rest of downstream jacks from the Wall Plate Splitter/Filter.

1. At the NID disconnect Pair 3 from the Center Office/Drop side of the demarc. On the customer side of the NID, connect Pair 3 to the Output of the RJ31x at the NID.

2. At the Intermediate Jack (s) connect Pair 2 coming from the NID to terminal posts number 1. Then connect a jumper from terminal posts 1 to terminal posts 3. Connect Pair 2 leaving the Intermediate Jack going toward the Wall Plate Splitter/Filter (or next Intermediate Jack) to terminal posts number 3. his needs to be a clean run through the Intermediate Jack(s) (terminating only to the Input of the RJ31x at the NID).

3. At the Wall Plate Splitter/Filter connect Pair 3 coming from the last Intermediate Jack toward the Wall Plate Splitter/Filter to terminal posts number 6.

D. Wall Plate Splitter/Filter Other

1. For this scenario you must NOT connect a jumper wire between terminal posts 5 & 6.

2. You also must connect the remaining “downstream” jacks using their Pair 1 (should not have been disturbed) to terminal posts number 4. U-verse Voice will now appear on the outer pair of the Line 2 port as well as the remain jacks within the living unit.

8. Install a new phone cord from the LIL2 port of the RG to “From RG for VoIP” port on the Wall Plate Splitter/Filter.

9. Test all the appropriate jacks within the residence for the presence of U-verse Voice.

10. For installation regarding the HSIA and/or IPTV, refer to ATT-TELCO-IS-002-300-034.

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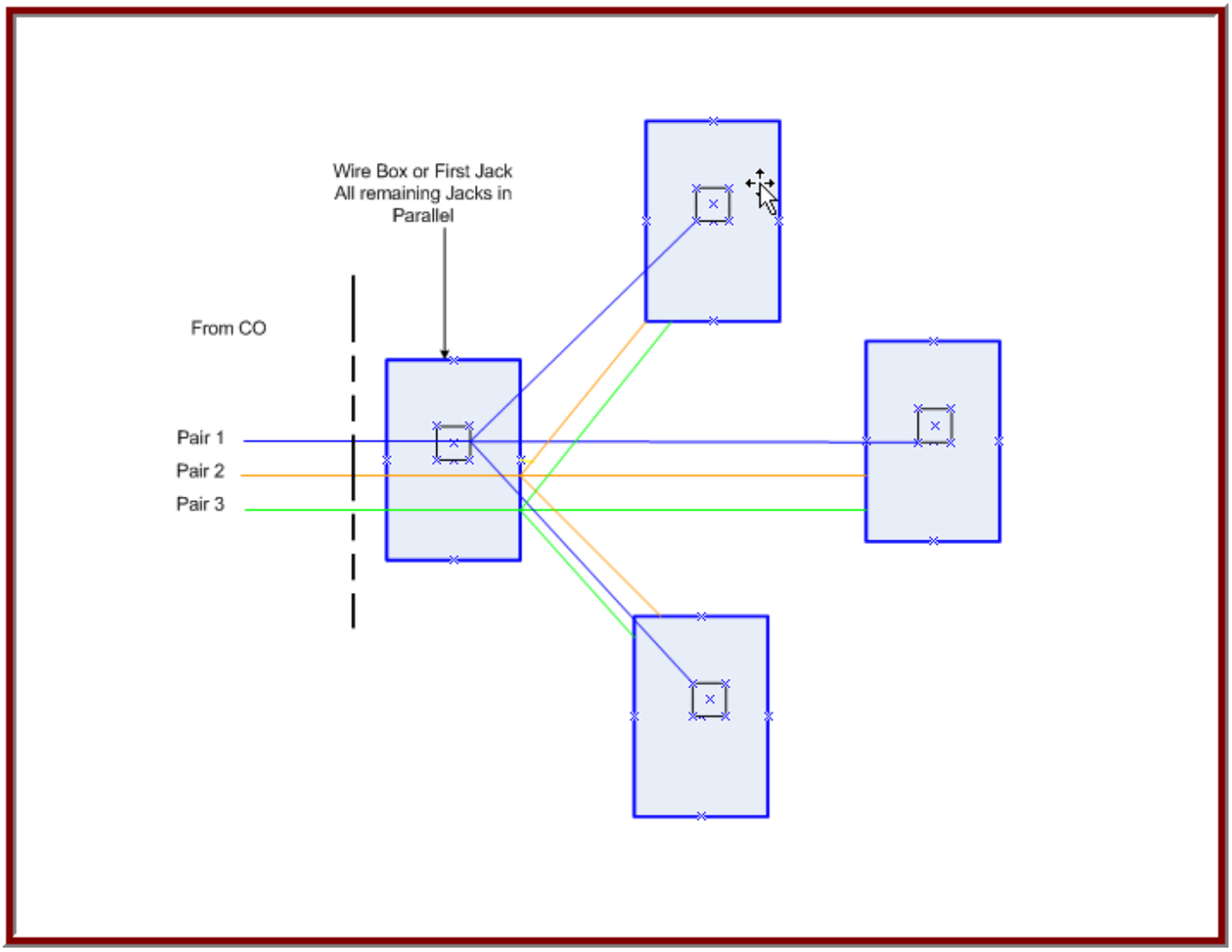
6.10. Scenario S - POTS set-up for MDU Premises Wiring in "Home Run"

Figure 19: Scenario S



This diagram is to be used as a reference regarding the current implementation for POTS where the Premises Wiring has been installed as "Home Run". There are not steps to install for this scenario, reference only.

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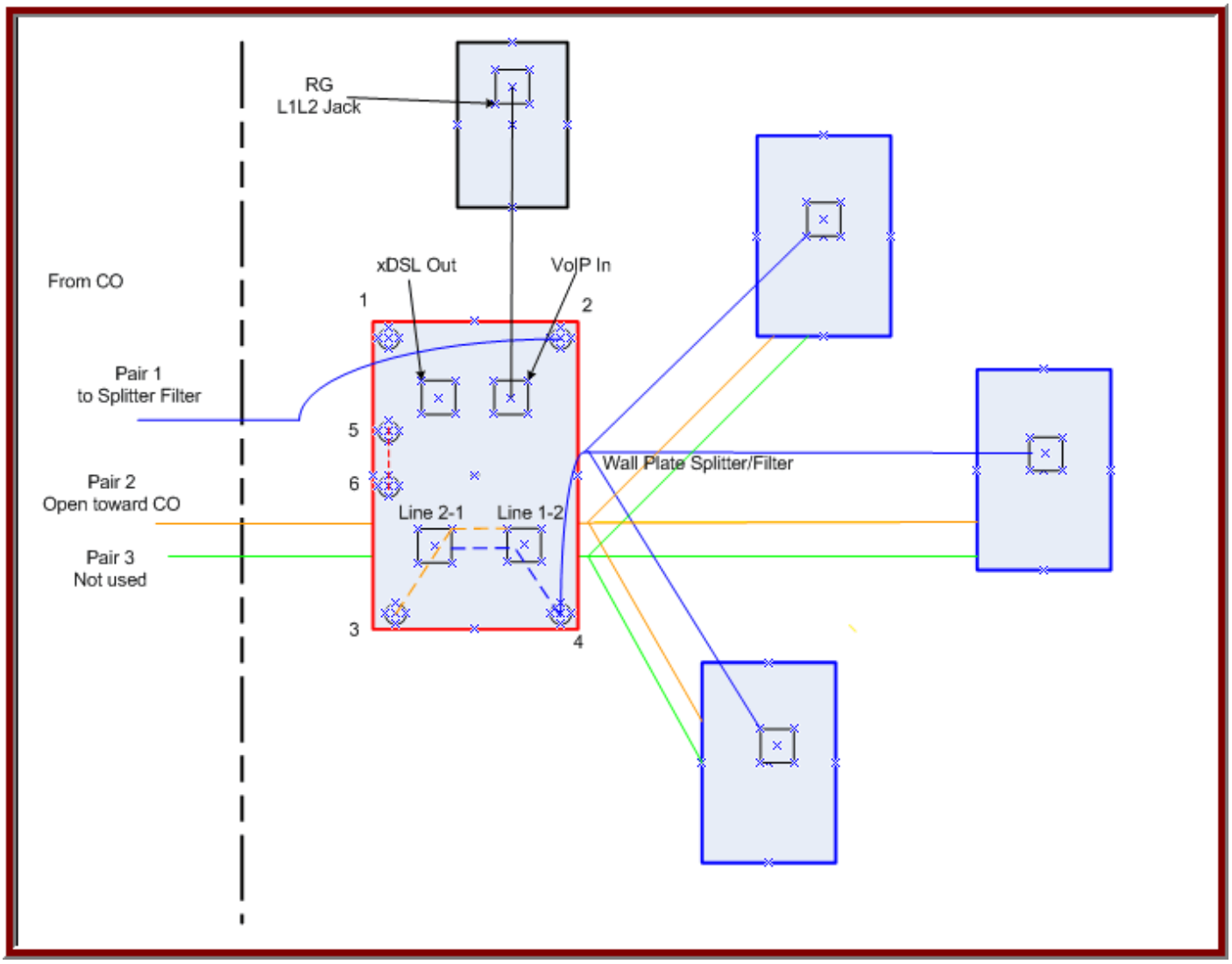
6.11. Scenario T – U-verse Voice set-up for MDU Premises Wiring in "Home Run"

Figure 20: Scenario T



This diagram is to be used as a reference regarding the implementation for U-verse Voice where the Premises Wiring has been installed as "Home Run". (In this scenario, the Intermediate Jack(s) are not required. Wiring required for IPTV and/or HSIA is not shown.)

Steps to Install:

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1. Identify location for RG
2. Check the LED indicators for VoIP on the RG and ensure that they are solid green. (see Reference 4)
3. Make an outbound test call from the L1L2 port of the RG using your hand set. If this fails or the indicators are not correct (see Reference 4), contact Tier 2 Support immediately. Do not proceed with the installation until these issues have been resolved.
4. Pull the local wall jack & sever wiring (one segment is toward CO, the other segment is toward the Premises. All jacks upstream toward CO will have dial tone present.).
5. Test all jacks in the living unit.
6. Set Wall Plate Splitter/Filter & Intermediate Jack switches.

    A. For this installation, both switches at the Wall Plate Splitter/Filter should be set for VoIP.

7. Wiring for Pairs 1-3.

    A. Pair 1 will be used to deliver the U-verse service from the CO to the Wall Plate Splitter/Filter.

        1. At the Wall Plate Splitter/Filter connect Pair 1 coming from the customer side of the Demarc to terminal posts number 2. These terminal posts feed the inward side of the Splitter-Filter.

    B. Pair 2 is not used.

    C. Pair 3 is not used.

    D. Wall Plate Splitter/Filter Other

        1. For this scenario you must place the Alarm Present dip-switch setting to “No”.
        2. Connect the remaining “downstream” jacks using their Pair 1 (should not have been disturbed) to terminal posts number 4. U-verse Voice will now appear on the outer pair of the Line 2 port as well as the remain jacks within the living unit.

8. Install a new phone cord from the LIL2 port of the RG to “From RG for VoIP” port on the Wall Plate Splitter/Filter.
9. Test all the appropriate jacks within the residence for the presence of U-verse Voice.
10. For installation regarding the HSIA and/or IPTV, refer to ATT-TELCO-IS-002-300-034.

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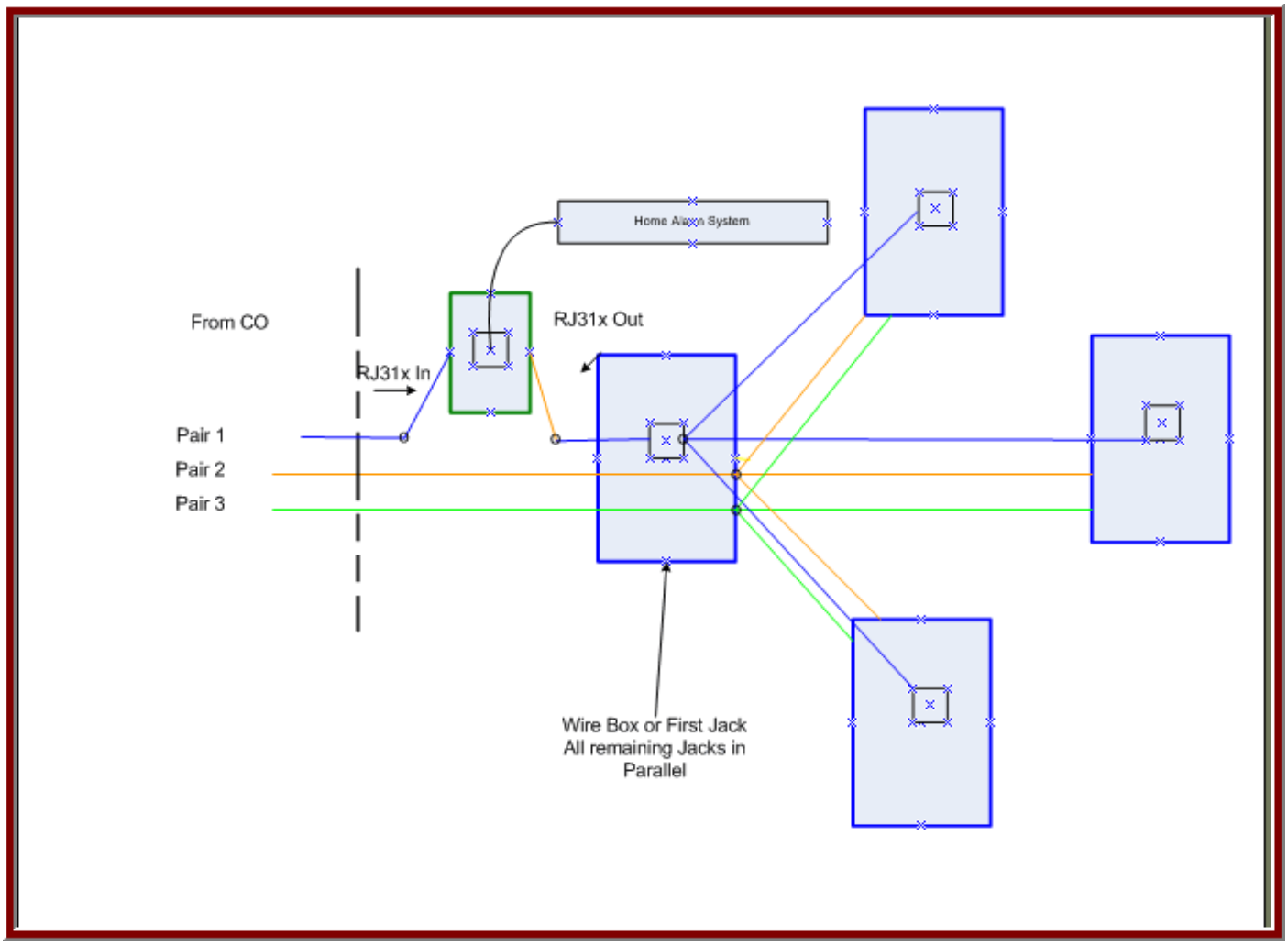
6.12. Scenario U – POTS set-up for MDU Premises Wiring in "Home Run" and there is a Monitored Home Alarm installed within the living unit.

Figure 21: Scenario U



This diagram is to be used as a reference regarding the current implementation for POTS where the Premises Wiring has been installed as "Home Run" and there is a Monitored Home Alarm installed within the living unit. There are not steps to install for this scenario, reference only.

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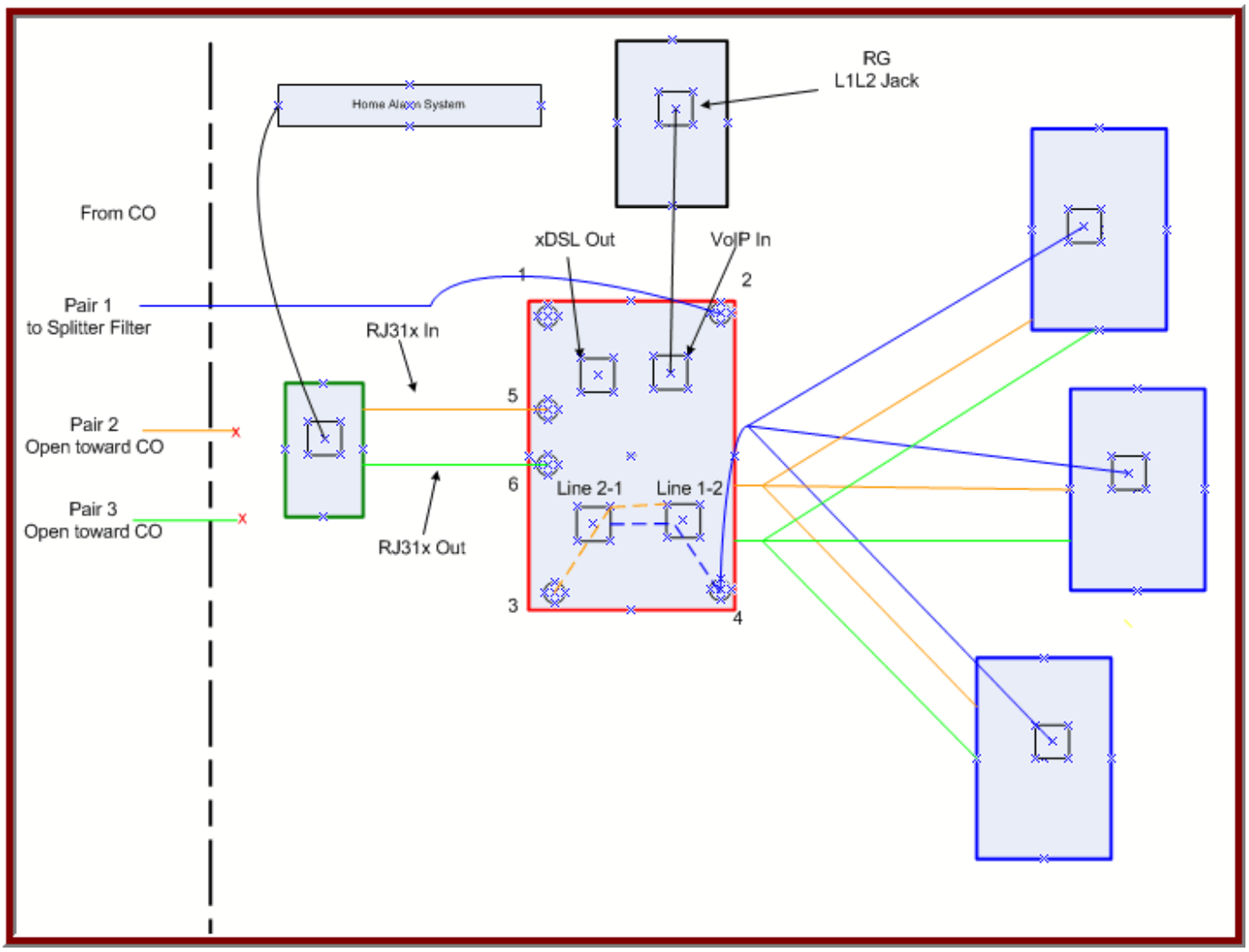
6.13. Scenario V – U-verse Voice set-up for MDU Premises Wiring in "Home Run" and there is a Monitored Home Alarm installed within the living unit.

Figure 22: Scenario V



This diagram is to be used as a reference regarding the implementation for U-verse Voice where the Premises Wiring has been installed as "Home Run" and there is a Monitored Home Alarm installed within the living unit. (In this scenario, the Intermediate Jack(s) are not required. Wiring required for IPTV and/or HSIA is not shown.)

Steps to Install:

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1. Identify location for RG

2. Check the LED indicators for VoIP on the RG and ensure that they are solid green. (see Reference 4)

3. Make an outbound test call from the L1L2 port of the RG using your hand set. If this fails or the indicators are not correct (see Reference 4), contact Tier 2 Support immediately. Do not proceed with the installation until these issues have been resolved.

4. Pull the local wall jack & sever wiring (one segment is toward CO, the other segment is toward the Premises. All jacks upstream toward CO will have dial tone present.).

5. Test all jacks in the living unit.

6. Set Wall Plate Splitter/Filter & Intermediate Jack switches.

    A. For this installation, both switches at the Wall Plate Splitter/Filter should be set for VoIP.

7. Wiring for Pairs 1-3.

    A. Pair 1 will be used to deliver the U-verse service from the CO to the Wall Plate Splitter/Filter.

        1. At the Wall Plate Splitter/Filter connect Pair 1 coming from the customer side of the Demarc to terminal posts number 2. These terminal posts feed the inward side of the Splitter-Filter.

    B. Pair 2 will be used to deliver U-verse Voice to the Monitored Home Alarm. You must place the Alarm Present dip-switch setting to “Yes”.

        1. At the Demarc disconnect Pair 2 from the Center Office/Drop. On the customer side of the Demarc, connect Pair 2 to the Input of the RJ31x.

        2. At the Wall Plate Splitter/Filter connect Pair 2 coming from the customer side of the Demarc toward the Wall Plate Splitter/Filter to terminal posts number 5.

    C. Pair 3 will be used to deliver U-verse Voice back toward the Wall Plate Splitter/Filter and the rest of downstream jacks from the Wall Plate Splitter/Filter.

        1. At the Demarc disconnect Pair 3 from the Center Office/Drop. On the customer side of the Demarc, connect Pair 3 to the Output of the RJ31x.

        2. At the Wall Plate Splitter/Filter connect Pair 3 coming from the customer side of the Demarc toward the Wall Plate Splitter/Filter to terminal posts number 6.

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D. Wall Plate Splitter/Filter Other

1. For this scenario you must NOT connect a jumper wire between terminal posts 5 & 6.
2. You also must connect the remaining “downstream” jacks using their Pair 1 (should not have been disturbed) to terminal posts number 4. U-verse Voice will now appear on the outer pair of the Line 2 port as well as the remain jacks within the living unit.

8. Install a new phone cord from the LIL2 port of the RG to “From RG for VoIP” port on the Wall Plate Splitter/Filter.
9. Test all the appropriate jacks within the residence for the presence of U-verse Voice.
10. For installation regarding the HSIA and/or IPTV, refer to ATT-TELCO-IS-002-300-034.

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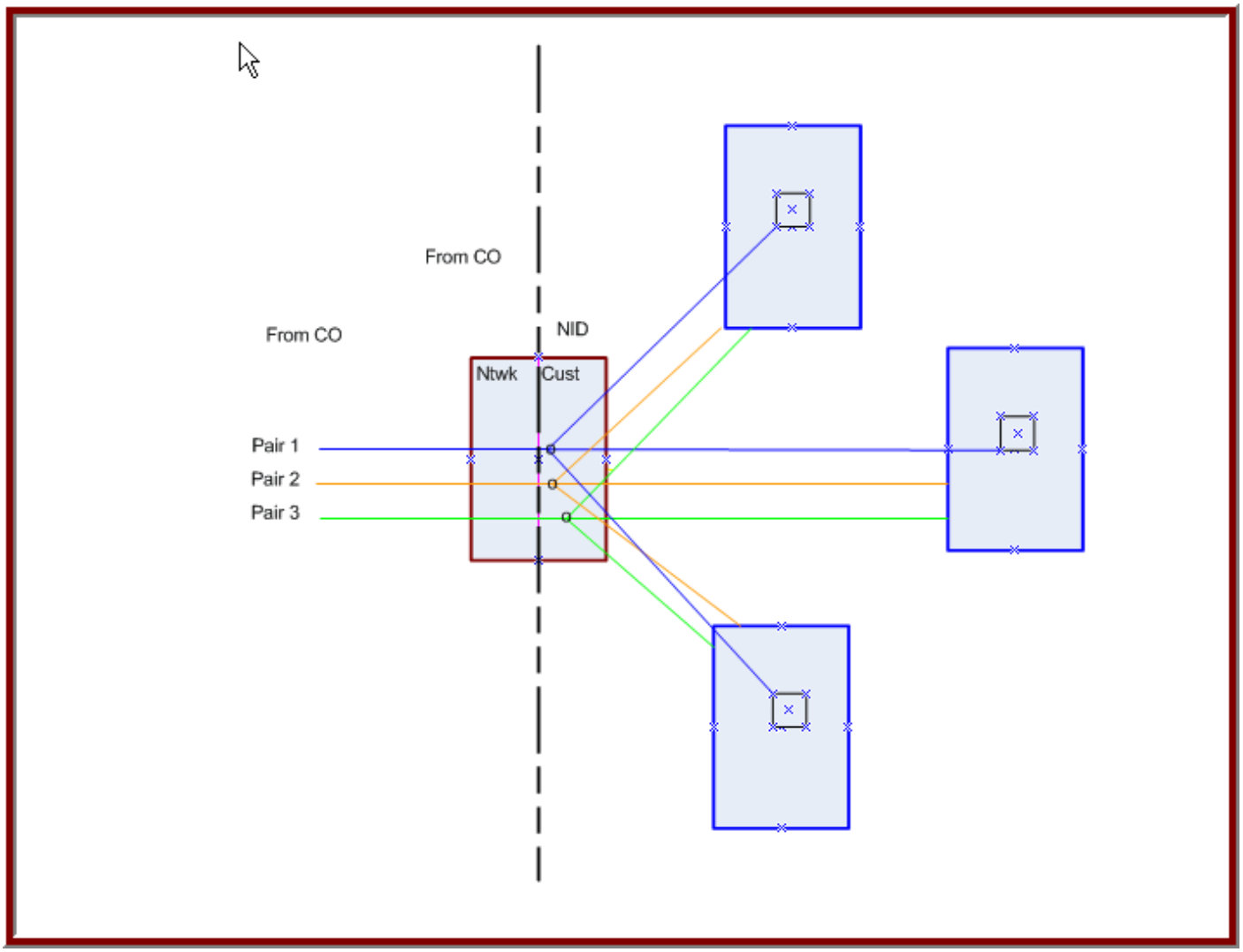
6.14. Scenario W – POTS set-up for MDU Premises Wiring in "Home Run" and there is a NID and/or SNI installed within the living unit.

Figure 23: Scenario W



This diagram is to be used as a reference regarding the current implementation for POTS where the Premises Wiring has been installed as "Home Run" and there is a NID and/or SNI installed within the living unit. There are not steps to install for this scenario, reference only.

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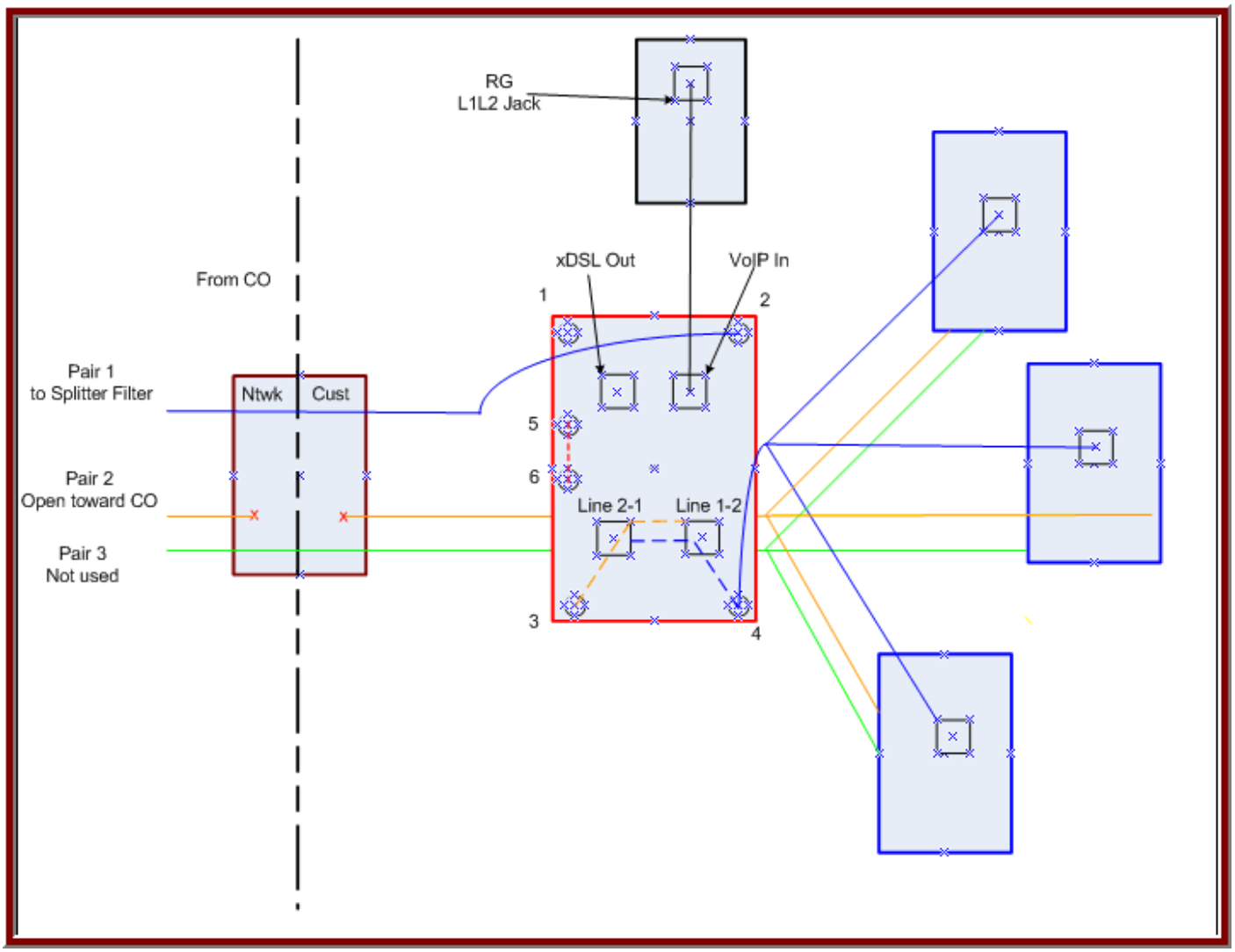
6.15. Scenario X – U-verse Voice set-up for MDU Premises Wiring in "Home Run" and there is a NID and/or SNI installed within the living unit.

Figure 24: Scenario X



This diagram is to be used as a reference regarding the implementation for U-verse Voice where the Premises Wiring has been installed as "Home Run" and there is a NID and/or SNI within the living unit. (In this scenario, the Intermediate Jack(s) are not required. Wiring required for IPTV and/or HSIA is not shown.)

Steps to Install:

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1. Identify location for RG
2. Check the LED indicators for VoIP on the RG and ensure that they are solid green. (see Reference 4)
3. Make an outbound test call from the L1L2 port of the RG using your hand set. If this fails or the indicators are not correct (see Reference 4), contact Tier 2 Support immediately. Do not proceed with the installation until these issues have been resolved.
4. Pull the local wall jack & sever wiring (one segment is toward CO, the other segment is toward the Premises. All jacks upstream toward CO will have dial tone present.).
5. Test all jacks in the living unit.
6. Set Wall Plate Splitter/Filter & Intermediate Jack switches.

    A. For this installation, both switches at the Wall Plate Splitter/Filter should be set for VoIP.

7. Wiring for Pairs 1-3.

    A. Pair 1 will be used to deliver the U-verse service from the CO to the Wall Plate Splitter/Filter.

        1. At the Wall Plate Splitter/Filter connect Pair 1 coming from NID to terminal posts number 2. These terminal posts feed the inward side of the Splitter-Filter.

    B. Pair 2 is not used.

    C. Pair 3 is not used.

    D. Wall Plate Splitter/Filter Other

        1. For this scenario you must place the Alarm Present dip-switch setting to “No”.
        2. Connect the remaining “downstream” jacks using their Pair 1 (should not have been disturbed) to terminal posts number 4. U-verse Voice will now appear on the outer pair of the Line 2 port as well as the remain jacks within the living unit.

8. Install a new phone cord from the LIL2 port of the RG to “From RG for VoIP” port on the Wall Plate Splitter/Filter.
9. Test all the appropriate jacks within the residence for the presence of U-verse Voice.
10. For installation regarding the HSIA and/or IPTV, refer to ATT-TELCO-IS-002-300-034.

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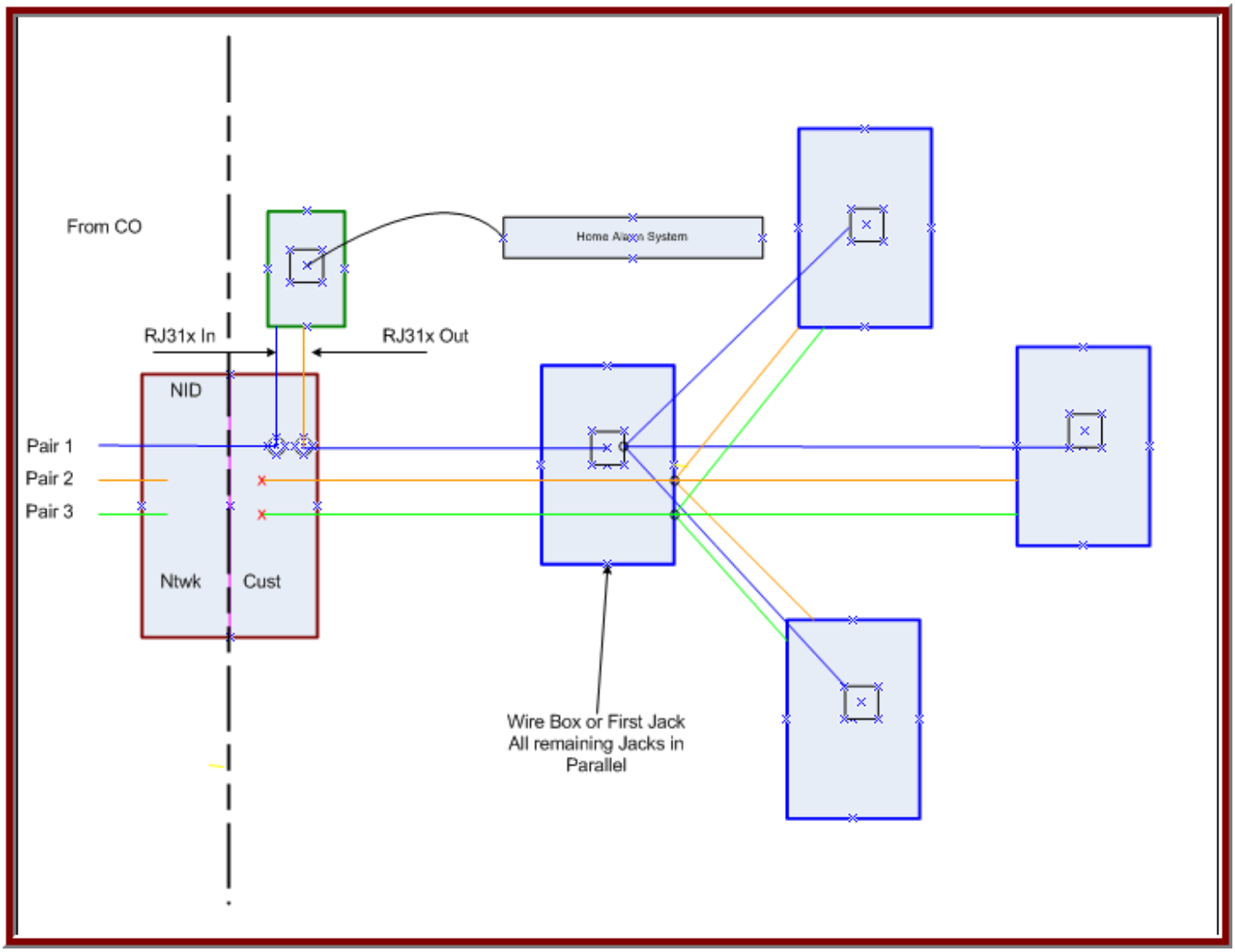
6.16. Scenario Y – POTS set-up for MDU Premises Wiring as "Home Run" with a NID or SNI located within the living unit as well as a Monitored Home Alarm.

Figure 25: Scenario Y



This diagram is to be used as a reference regarding the current implementation for POTS where the Premises Wiring has been installed as "Home Run" and there is a NID and/or SNI installed within the living unit as well as a Monitored Home Alarm. There are not steps to install for this scenario, reference only.

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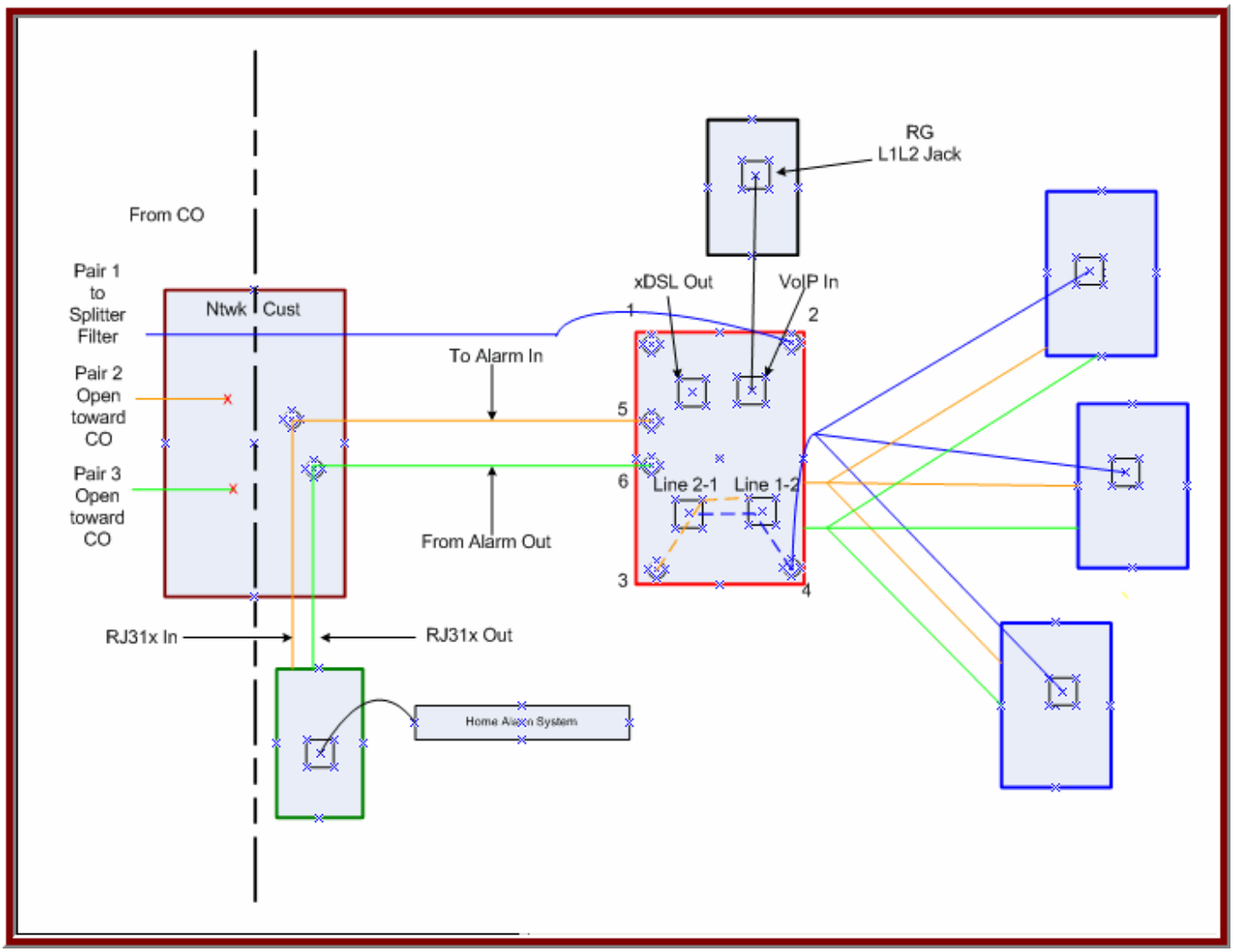
6.17. Scenario Z – U-verse Voice set-up for MDU Premises Wiring in "Home Run" and there is a Monitored Home Alarm installed within the living unit.

Figure 26: Scenario Z



This diagram is to be used as a reference regarding the implementation for U-verse Voice where the Premises Wiring has been installed as "Home Run", there is a NID and/or SNI and there is a Monitored Home Alarm installed within the living unit. (In this scenario, the Intermediate Jack(s) are not required. Wiring required for IPTV and/or HSIA is not shown.)

Steps to Install:

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1. Identify location for RG

2. Check the LED indicators for VoIP on the RG and ensure that they are solid green. (see Reference 4)

3. Make an outbound test call from the L1L2 port of the RG using your hand set. If this fails or the indicators are not correct (see Reference 4), contact Tier 2 Support immediately. Do not proceed with the installation until these issues have been resolved.

4. Pull the local wall jack & sever wiring (one segment is toward CO, the other segment is toward the Premises. All jacks upstream toward NID will have dial tone present.).

5. Test all jacks in the living unit.

6. Set Wall Plate Splitter/Filter & Intermediate Jack switches.

    A. For this installation, both switches at the Wall Plate Splitter/Filter should be set for VoIP.

7. Wiring for Pairs 1-3.

    A. Pair 1 will be used to deliver the U-verse service from the CO to the Wall Plate Splitter/Filter.

        1. At the Wall Plate Splitter/Filter connect Pair 1 coming from NID to terminal posts number 2. These terminal posts feed the inward side of the Splitter-Filter.

    B. Pair 2 will feed U-verse Voice to the Monitored Home Alarm. You must place the Alarm Present dip-switch setting to “Yes”.

        1. At the NID disconnect Pair 2 from the Center Office/Drop. On the customer side of the NID, connect Pair 2 to the Input of the RJ31x.

        2. At the Wall Plate Splitter/Filter connect Pair 2 coming from the customer side of the Demarc toward the Wall Plate Splitter/Filter to terminal posts number 5.

    C. Pair 3 will be used to deliver U-verse Voice back toward the Wall Plate Splitter/Filter and the rest of downstream jacks from the Wall Plate Splitter/Filter.

        1. At the NID disconnect Pair 3 from the Center Office/Drop. On the customer side of the NID, connect Pair 3 to the Output of the RJ31x.

        2. At the Wall Plate Splitter/Filter connect Pair 3 coming from the customer side of the Demarc toward the Wall Plate Splitter/Filter to terminal posts number 6.

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D. Wall Plate Splitter/Filter Other

1. For this scenario you must NOT connect a jumper wire between terminal posts 5 & 6.

2. Connect the remaining “downstream” jacks using their Pair 1 (should not have been disturbed) to terminal posts number 4. U-verse Voice will now appear on the outer pair of the Line 2 port as well as the remain jacks within the living unit.

8. Install a new phone cord from the LIL2 port of the RG to “From RG for VoIP” port on the Wall Plate Splitter/Filter.

9. Test all the appropriate jacks within the residence for the presence of U-verse Voice.

10. For installation regarding the HSIA and/or IPTV, refer to ATT-TELCO-IS-002-300-034.

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7. Activation of new U-verse Voice Phone Number

This section provides the numbered steps required to activate and test the U-verse Voice number for installations where the number is to be ported from a POTS line to a U-verse Voice line. Follow all the numbered steps in order to successfully activate the U-verse Voice number. Furthermore, you must ensure all wiring is complete and that an outbound call was completed successfully prior to the activation. For examples and reference of the potential call scenarios, refer to “Section 12”.

Activation Warning 1: Due to provisioning and system limitation it is imperative that all the Set Top Boxes and the associated Residential Gateway and/or iNID have been activated prior to performing the following steps. If the CPE is not active the systems will not be able to complete the associated porting activity, see reference 13 for detailed flow information..

Steps of Activation:

1. Using the IVR (866-315-5832) confirm Portability activation. This should be one of the last steps of installing the U-verse Voice service (other than the additional testing that is required below). Please call using the main U-verse Voice TN you are porting after all work has been completed. The IVR will see the ANI and will ask if this is the number you are calling about. It is suggested that you call from the main U-verse Voice line that is being ported when you call into the IVR. If you are not calling from this main line, please input the main line that is to be ported. The IVR will then return back to you all the numbers at that customers location (if they have more than one) that need to be ported. You will then have the ability to activate one at a time or all at the same time. It is always recommended that you either select all or that you activate the main line first followed immediately by the remaining number(s). All numbers must be activated before beginning the test calls due to the upstream ordering systems' restrictions.

    A. If a successful activation message has been received from the IVR, proceed Step 2.

        1. If a successful message from the IVR is not received, repeat the activation via the IVR. Please do not hang up and retry but stay on the line to retry. This must be attempted three times. After three attempts, and the number still has not received a successful activation message from the IVR, the IVR will automatically route to Tier 2 support for assistance.

2. At times, the SAVL IVR may give a false success so it is important to verify that there is still Dial Tone at the Residential Gateway (RG) at the L1L2 port after the port activation if you did not use the main U-verse Voice line when activating.

    A. If dial tone is present proceed to Section 8.

        1. If not, verify RG for U-verse Voice in sync (see Reference 4).

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A. If in sync proceed Step 2 and repeat 1

1. If not, contact Installation Support Tier Two Team for assistance until issue is resolved. Then go back to Step 2 and repeat.

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8. Testing for U-verse Voice

8.1. Notes

Note 1: This is for information purposes only. Do not touch any wiring connected to the Alarm Panel. Correct installation of the Alarm Panel is the job of the Monitored Home Alarm Service Provider. If a Monitored Home Alarm Service is to be supported by U-verse Voice, it must be installed such that the Alarm Panel is the first device connected to the RG/NID. All other jacks, phones or other analog CPE must be connected after the Alarm Panel.

Note 2: Please allow 15 minutes from the time the activation success message has been received before beginning the test calls. This is important because you may get a false success from the SAVL IVR.)

8.2. Steps to Test & Verify U-verse Voice

Follow these steps to test/verify that U-verse Voice is working correctly:

1. Ensure the that the home wiring is connected to the RG per the scenario diagrams found in Sections 5& 6
2. Verify Dial Tone at each jack as appropriate.
    A. If all appropriate jacks have dial tone, proceed Step 3.
        1. If not, resolve wiring issues within home and go back to Step 2, repeat.
3. Begin Test Calls
    A. Make a test call from your cell phone to the number in the home that is now a U-verse Voice number.
        1. If the call completed proceed Step 3-A-2 .
            A. If not, check the RG for U-verse Voice in sync status (Reference 4).
                1. If status is positive then proceed Step 3-A and repeat steps.

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A. If not, contact Installation Support Tier Two Team and report trouble. Once it is resolved proceed to Step 3-A and repeat steps.

2. Verify that the call quality is acceptable.

A. If quality is good, proceed Step 3-A-3.

1. If the quality is not acceptable, contact Installation Support Tier Two Team and report trouble. Once it is resolved proceed Step 3-A and repeat steps.

3. Verify Caller ID with Name is correct. (This test will only be valid on calls made to the U-verse Voice phone. Any calls made from the U-verse Voice phone to any other may not display the customers' name at this time due to provisioning limitations. Skip this test if you are making an outbound call test and proceed to Step 3-C).

A. If correct proceed to 3-B.

1. If incorrect obtain the data (if any) and make a note of it for reporting to Installation Support Tier Two Team for resolution. Once it is resolved proceed 3-A and repeat steps.

B. Make a call from the U-verse Voice number to your cell phone and repeat the steps found listed under Step 3-A.

1. Once complete proceed Step 3-C.

C. If the customer has U-verse Messaging, make a call from your cell phone to the U-verse Voice number and let it go to voicemail. Else, proceed to Step 4.

1. Verify that the voicemail platform responds with the following message: ”The person you have dialed cannot take your call now." If correct proceed Step 4.

A. If this response is not received verify that the number activated is the Primary number for the account.

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1. If the number that has been activated is the Primary number and the voicemail response did not match, contact Installation Support Tier Two Team and report the trouble. Once it is resolved proceed Step 3-C and repeat steps. (You may need to verify the Voicemail settings via the WebPortal with Tier 2.).

    A. If the number that has been activated is not the Primary number you must activate the Primary number. Go back to Step 1 and follow all the appropriate steps.

        1. If the voicemail response is still not received, contact Installation Support Tier Two Team and report the trouble. Once it is resolved proceed Step 5-C and repeat steps.

4. Verify Battery Back Up (BBU) - (see Reference 3)

    A. Make sure the audible alarm switch on the front of the BBU is switched to the “Not muted” (upper) position;

    B. Unplug the A/C cord from the wall outlet;

    C. The “On Battery” LED on the front of the BBU should display solid yellow, and an audible alarm should sound every 5 seconds;

    D. Place the audible alarm switch in the “Muted” (down) position to silence the audible alarm. Verify the alarm is silenced;

    E. Plug the A/C cord into the wall outlet;

    F. The “On Battery” LED should go out, and the “On A/C” LED should display solid green.

    G. Place the audible alarm switch to the “Not mute” (upper) position. This concludes the test and if all tests passed proceed to step 5.

        1. If not, replace the unit with a new one, mark the bad unit as defective and update inventory via GCAS, and proceed Step 4 and repeat steps.

5. If U-verse Voice is not the only service being installed refer back to (ATT-TELCO-IS-002-300-034) in order to complete the remaining work activity, up to and including the order completion, then return to Step 6.

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A. If U-verse Voice is the only service being installed then proceed directly to Step 6.

6. If installing all new U-verse products, wait until the entire installation has been complete before performing this test. Else, proceed with the test.

A. Make a test call to from your cell phone to the U-verse Voice number that has been installed.

B. Verify that the Caller ID via IPTV is functioning correctly.

1. If it is, proceed Step 7.

A. If not, verify that the option is turned on via the WebPortal and then proceed Step 7 and repeat steps.

1. If the Caller ID via IPTV is still not working correctly contact Installation Support Tier Two Team and report the trouble. Once it is resolved proceed to Step 6 and repeat steps.

7. Demonstrate to the customer the WebPortal access and Help Screens. At this time you should also establish U-verse Messaging with the customer if they have chosen that UM as part of their Service Package. There are linked documents in Section 11 that will provide direction on this activity. It is also recommended that you demonstrate the Video Self Help channel (411) on IPTV as an alternate source of information. Then proceed Step 8.

8. Ensure that the following items have been discussed and/or provided to the customer:**<u>their BAN</u>** as well as the and then proceed to Step 9.

A. The customer's BAN (should be found on the installation order)

B. U-verse Voice and Battery Backup educational material

1. NOTE: You should explain to the customer that it takes approximately 18 hours to charge a new, fully depleted battery at normal indoor temperatures. If a power outage occurs before the battery is fully charged, the battery-backup time will be reduced. Therefore, the customer should not rely on battery-backup power for at least 18 hours after your RG Battery Backup is initially installed or a replacement battery is thereafter installed. During these periods especially, and at all other times in general, the customer should ensure that they have an alternative means of dialing 911, such as via a cellular telephone. Your AT&T U-verse Voice service, including 911 dialing, will not function without electrical or battery-backup power.

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C. They should contact their Monitored Home Alarm provider to test the Monitored Home Alarm.

D. Review with the customer the significance of not removing the line from the RG L1L2 Port of the RG to the Wall Plate and/or Dual-port jack. If it is removed their phone service will be disrupted and will not function, to include such things as Monitored Home Alarms, 911 dialing, etc..

E. Remember that you need to warn customers that have Monitored Home Alarms against performing factory resets as this action will nullify the “Service Outage Detect” parameter. If this action is performed they should contact AT&T for assistance in restoring this parameter.

9. Complete order in GCAS.

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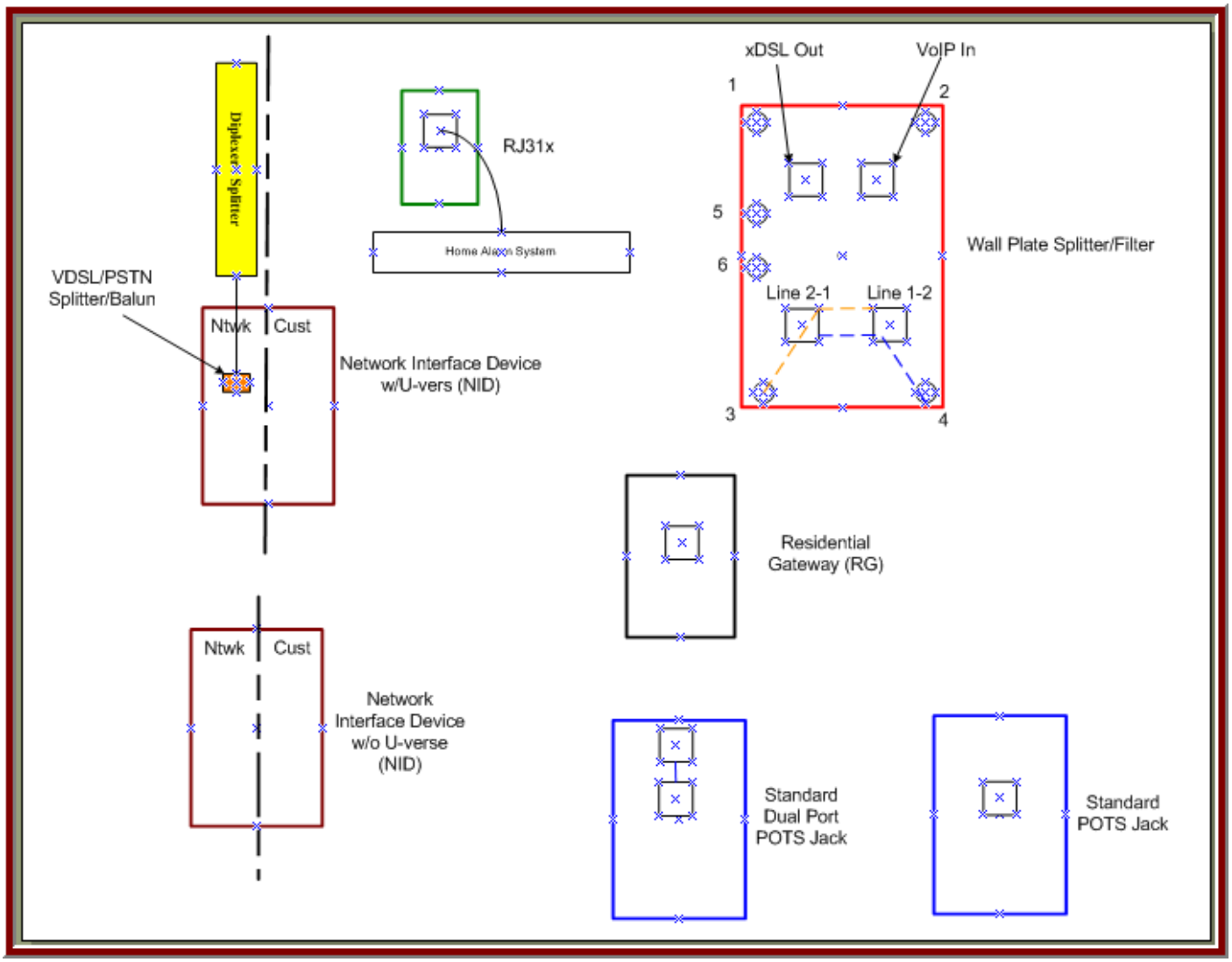
9. Diagrams' Legend

This is the legend to be used for each scenario as depicted in diagrams A-Z.

Figure 27: Legend



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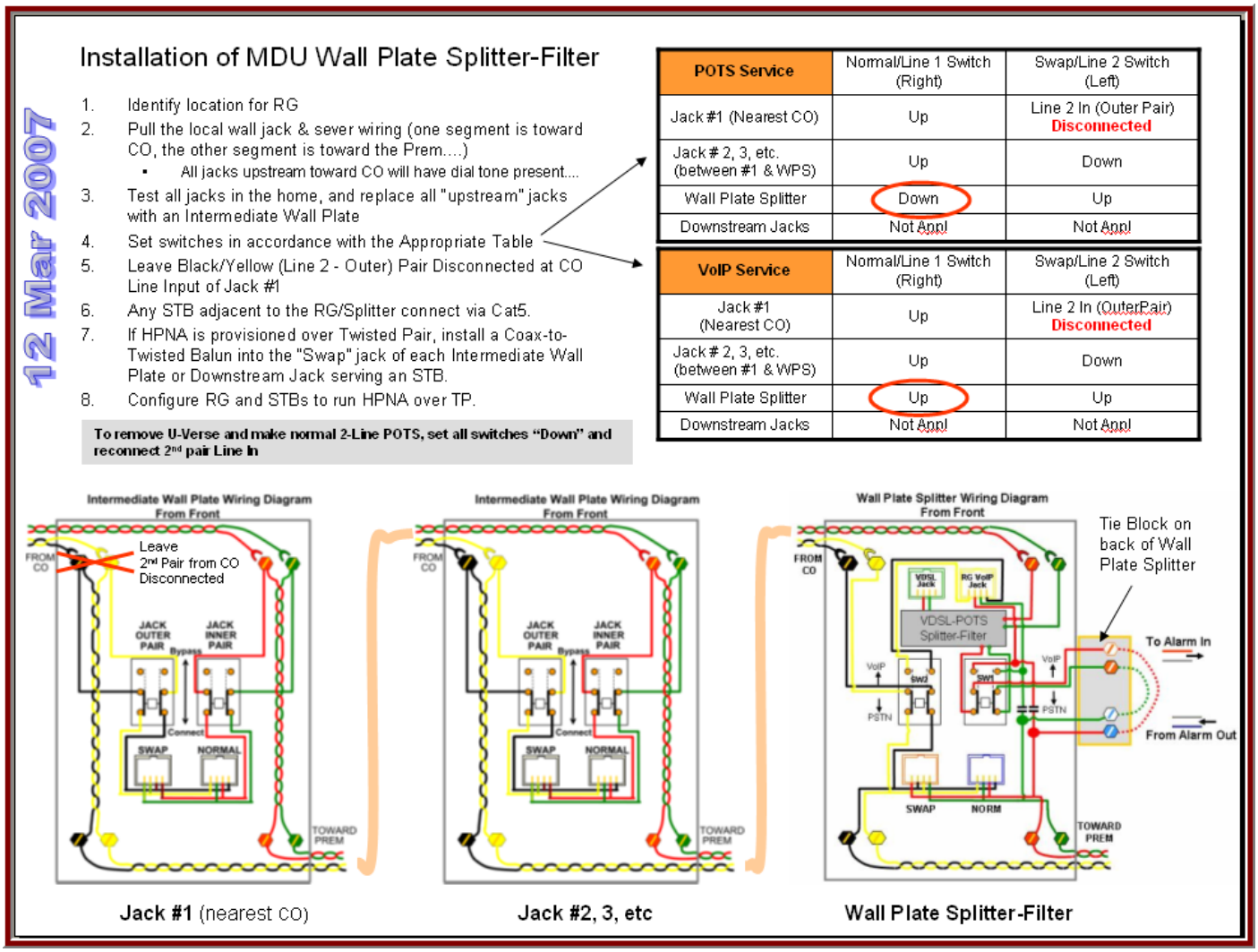
10. Reference Material

This section contains multiple drawings and tables as reference material for this Methods and Procedures document.

10.1. Reference 1 - the Intermediate Jack in conjunction with the Wall Plate Splitter/Filter

Figure 28: Reference 1



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10.2. Reference 2 - Switch Settings for both the Intermediate Jack and Wall Plate Splitter/Filter

Figure 29: Reference 2

POTS Service	Normal/Line 1 Switch (Right)	Swap/Line 2 Switch (Left)
Jack #1 (Nearest CO)	Up	Line 2 In (Outer Pair) **Disconnected**
Jack # 2, 3, etc. (between #1 & WPS)	Up	Down
Wall Plate Splitter	Down	Up
Downstream Jacks	Not Appl	Not Appl

VoIP Service	Normal/Line 1 Switch (Right)	Swap/Line 2 Switch (Left)
Jack #1 (Nearest CO)	Up	Line 2 In (OuterPair) **Disconnected**
Jack # 2, 3, etc. (between #1 & WPS)	Up	Down
Wall Plate Splitter	Up	Up
Downstream Jacks	Not Appl	Not Appl

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10.3. Reference 3 - LED Indicators on the Battery Backup - BBU Audible & Visual Alarms

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Figure 30: Reference 3

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Audible and Visual Alarms

The RG Battery Backup alarms to indicate certain events.

Front-Panel Label	Visual Indicator	Audible Alarm	Description
ON A/C	Green LED lights	None	The RG Battery Backup is operating on A/C.
Testing Battery	Green LED flashes	None	The RG Battery Backup is conducting a self-test. This automatic procedure is normal and will occur when the unit is switched on, and periodically thereafter. This procedure will last approximately 5 minutes.
ON Battery	Yellow LED lights	Tone every 5 seconds	The RG Battery Backup is operating on battery power. The alarm will stop when main power is returned.
Low Battery	Yellow LED flashes	Tone every 1 second	The battery energy is running low. This alarm will continue until the unit performs a forced shutdown when the battery is depleted.
Replace Battery	Red LED flashes	Tone every 2 seconds	This alarm warns that the battery has reached the end of its useful life. The user must replace the battery as soon as possible to ensure proper operation of the RG Battery Backup.
Fault	Red LED lights	Continuous tone	A fault has occurred. Disconnect equipment from the RG Battery Backup prior to checking equipment.

NOTE: Audible alarm will not sound when mute switch is in ON position.

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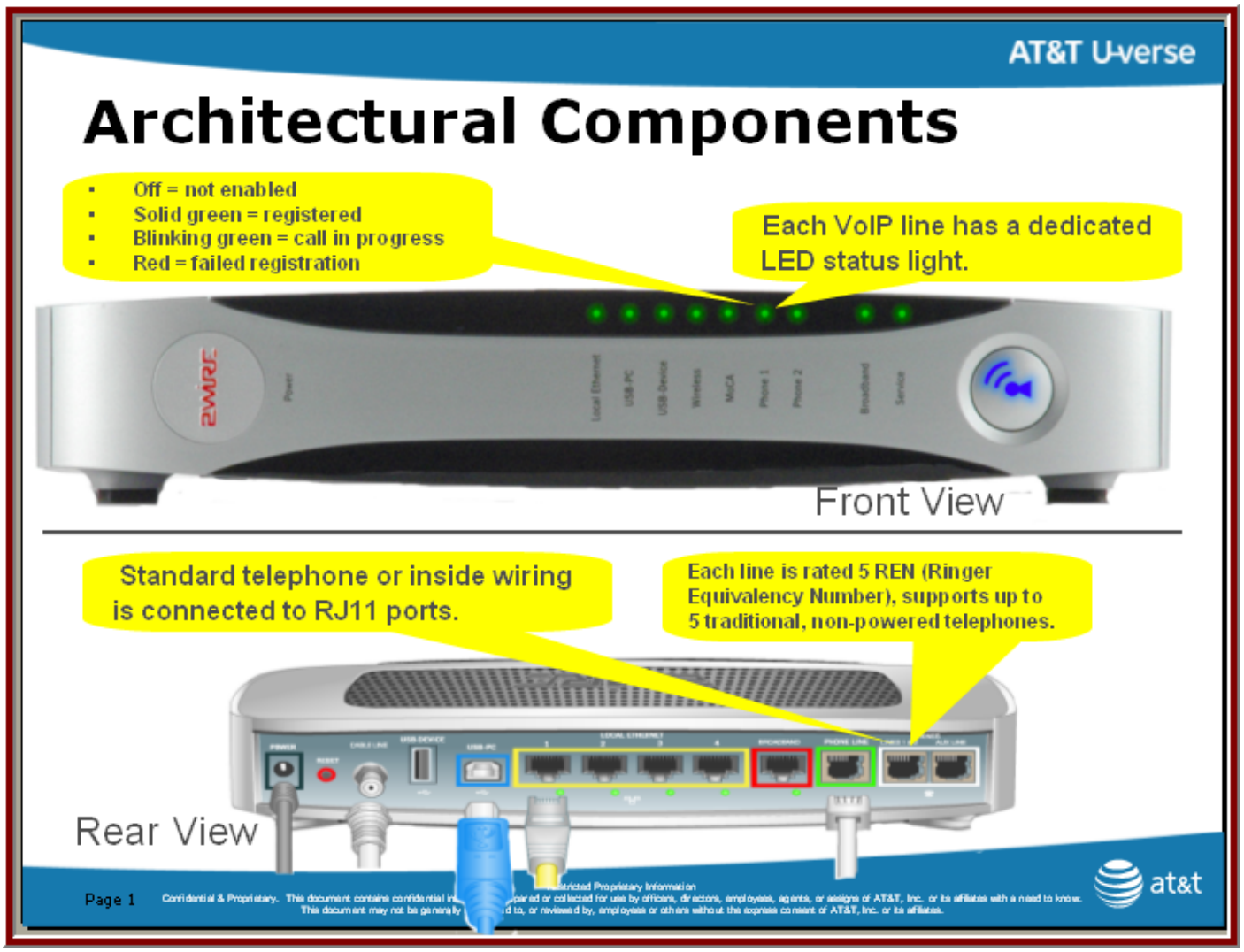
10.4. Reference 4 - LED Indicators on the RG for VoIP

Figure 31: Reference 4



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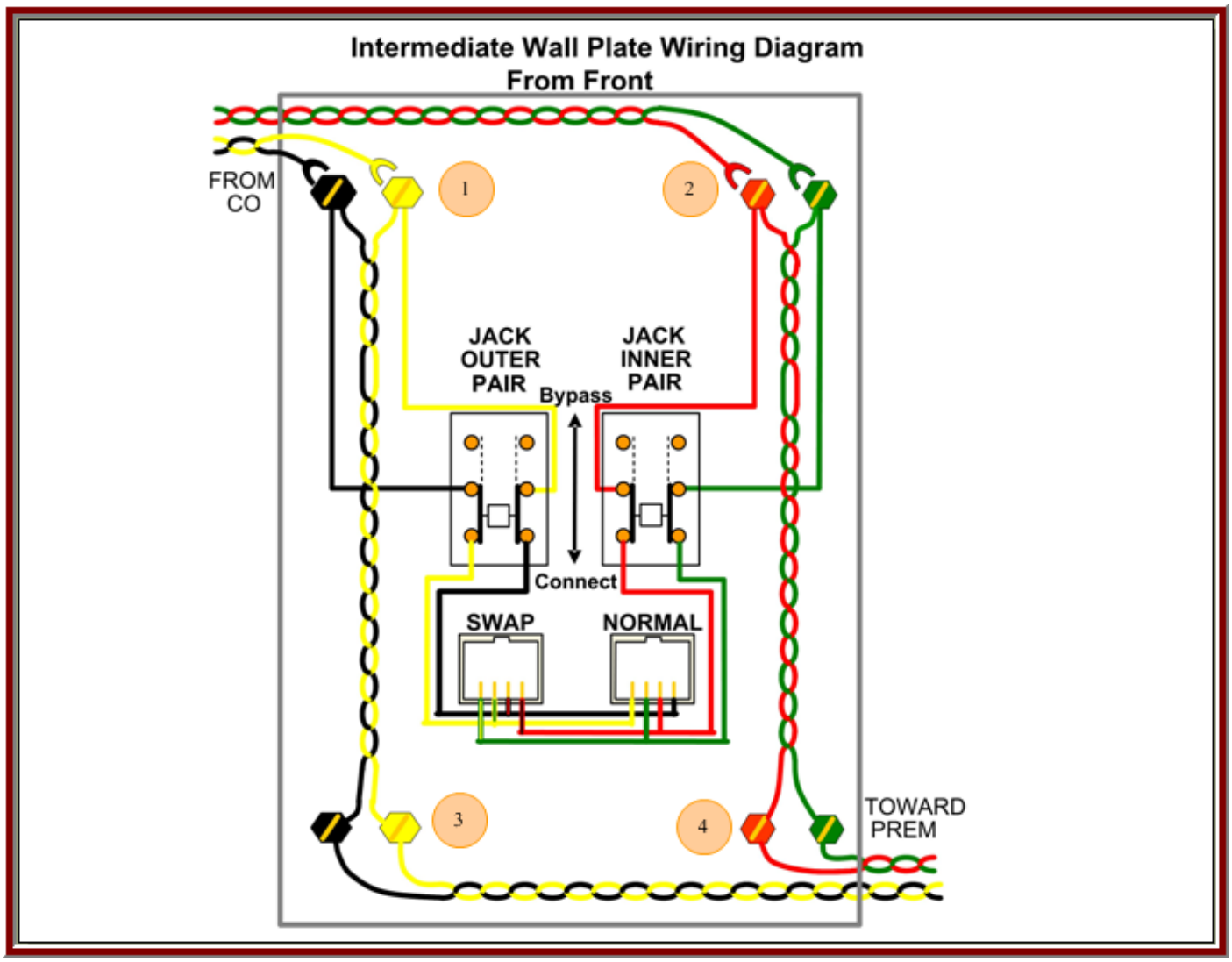
10.5. Reference 5 - Intermediate Jack - Large

Figure 32: Reference 5



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10.6. Reference 6 - Wall Plate Splitter/Filter - 4 Port Schematic & Front/Back View

Figure 33: Reference 6

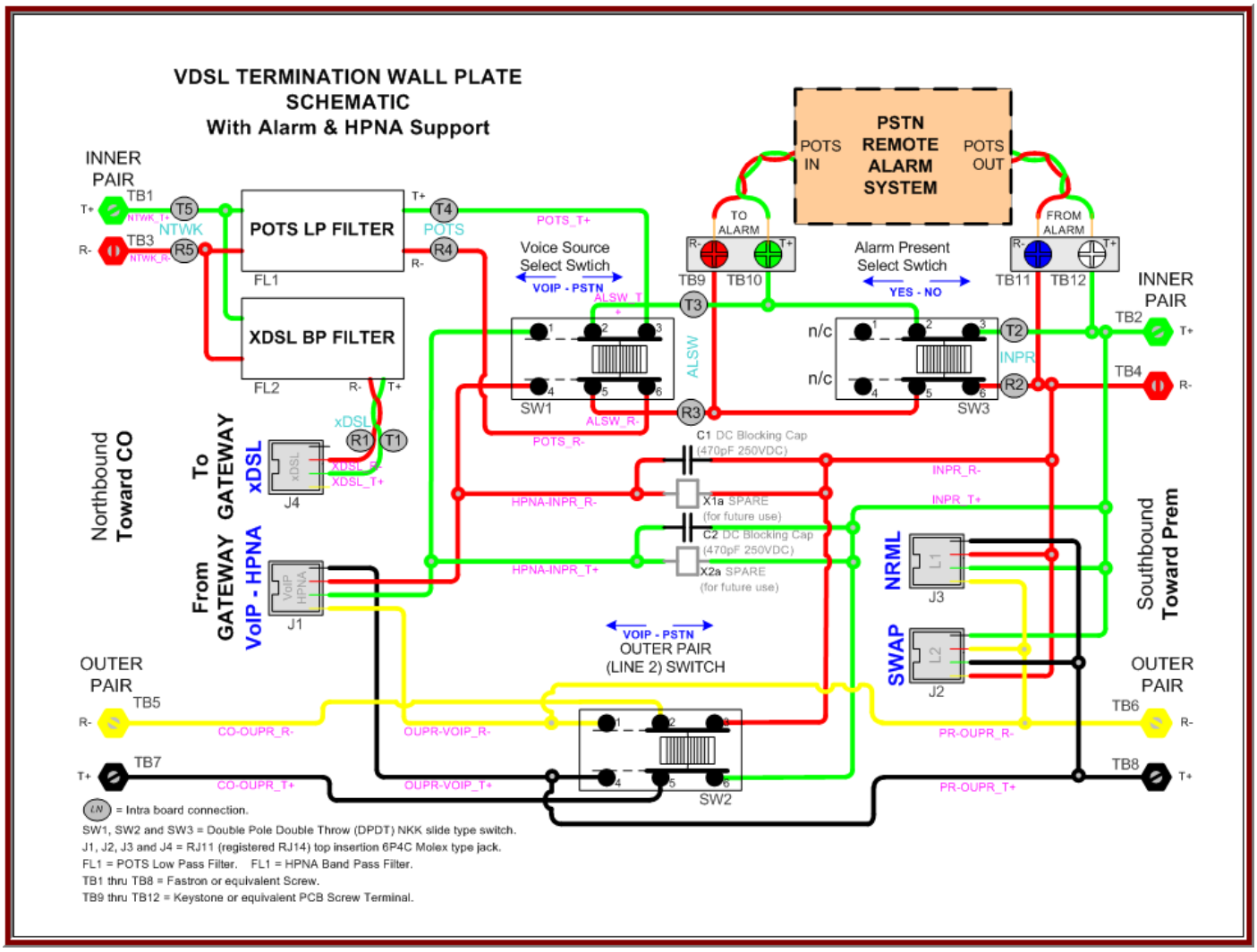

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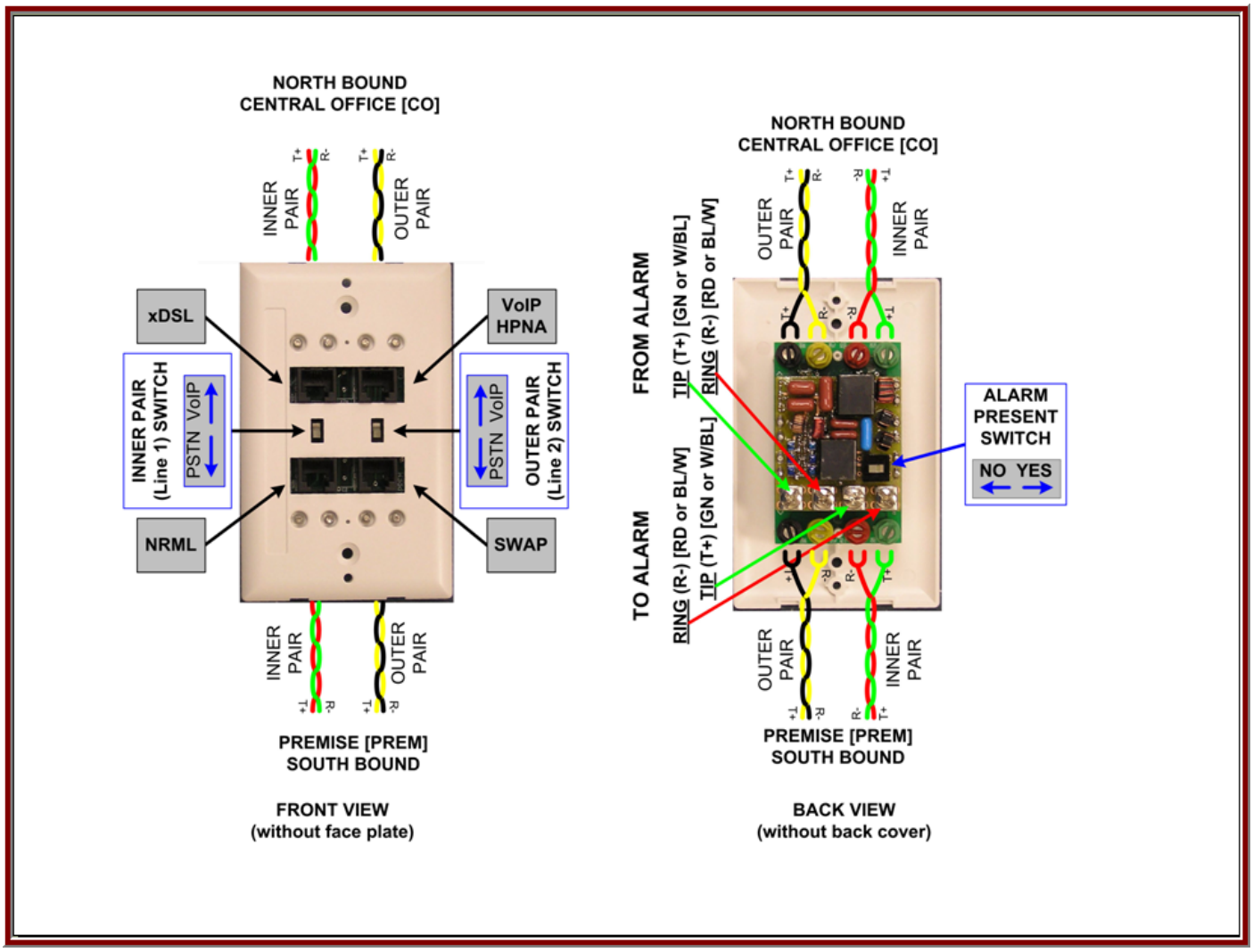
Figure 34: Reference 6



10.7. Reference 7 - Residential Gateway Connections (3000 Series)

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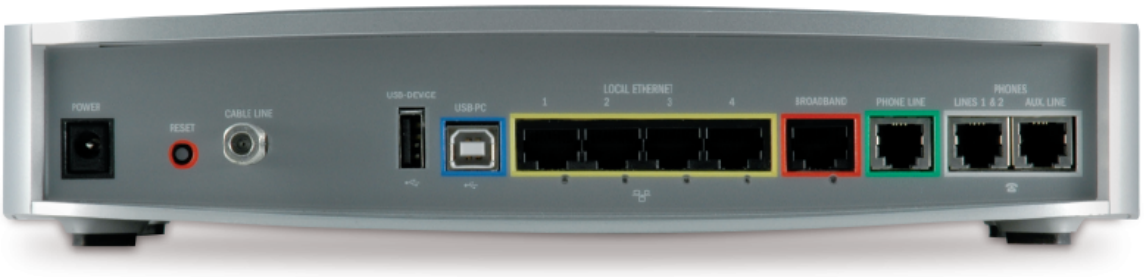
Figure 35: Reference 7

HomePortal® 3000 Series Residential Gateways

Model Number	MoCA	HPNAv3	Broadband Interface	Ethernet Ports	Wireless Enabled	USB PC	USB Device	Voice Over IP
3700HG	Yes	No	VDSL or Broadband Ethernet	4	HyperG	Yes	Yes	No
3700HGV	Yes	No	VDSL or Broadband Ethernet	4	HyperG	Yes	Yes	2 lines
3800HG	No	Yes	VDSL or Broadband Ethernet	4	HyperG	Yes	Yes	No
3800HGV	No	Yes	VDSL or Broadband Ethernet	4	HyperG	Yes	Yes	2 lines



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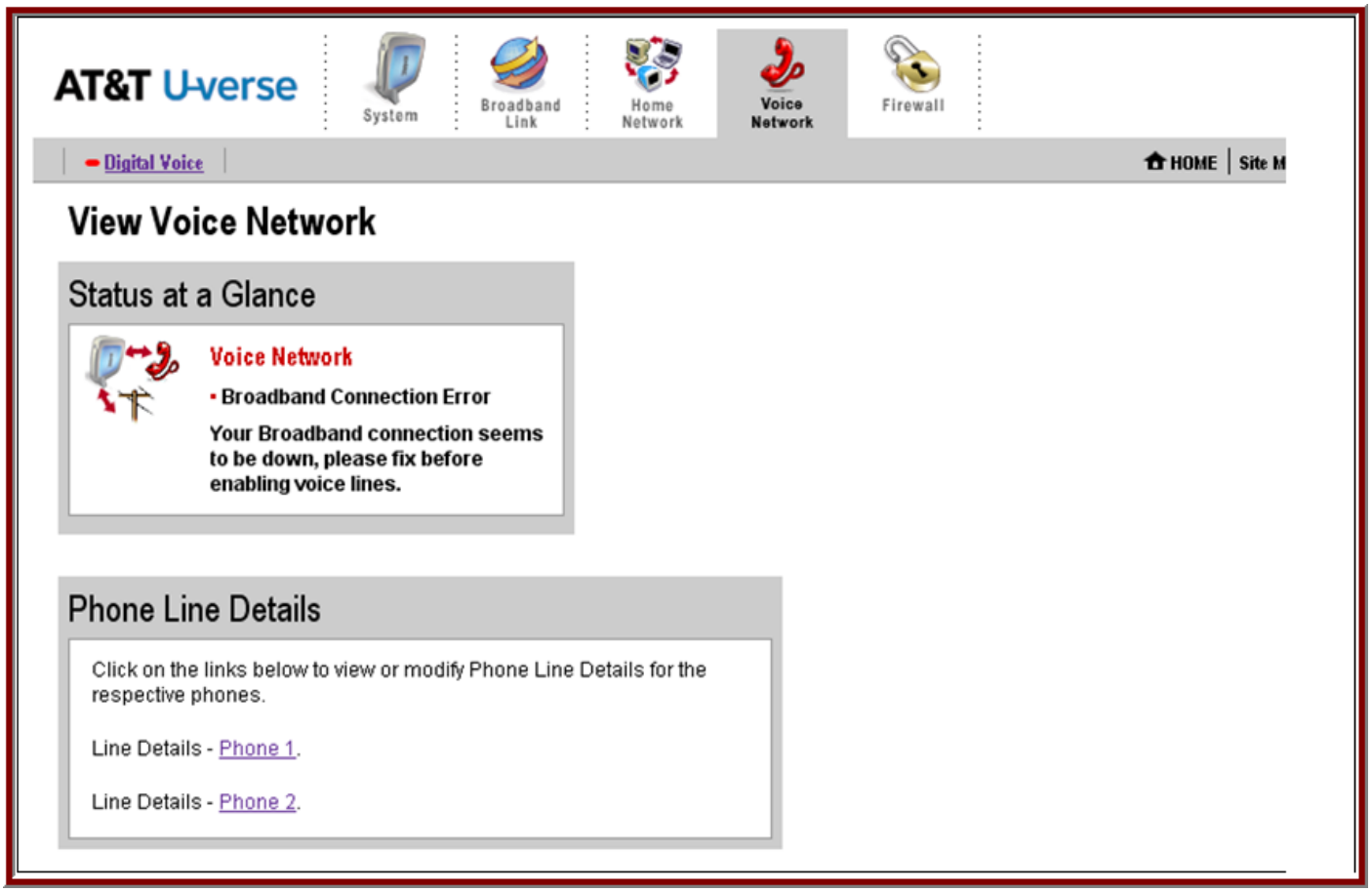
10.8. Reference 8 - Screen Shot 1 "Service Outage Detect"

Figure 36: Screen Shot 1.png



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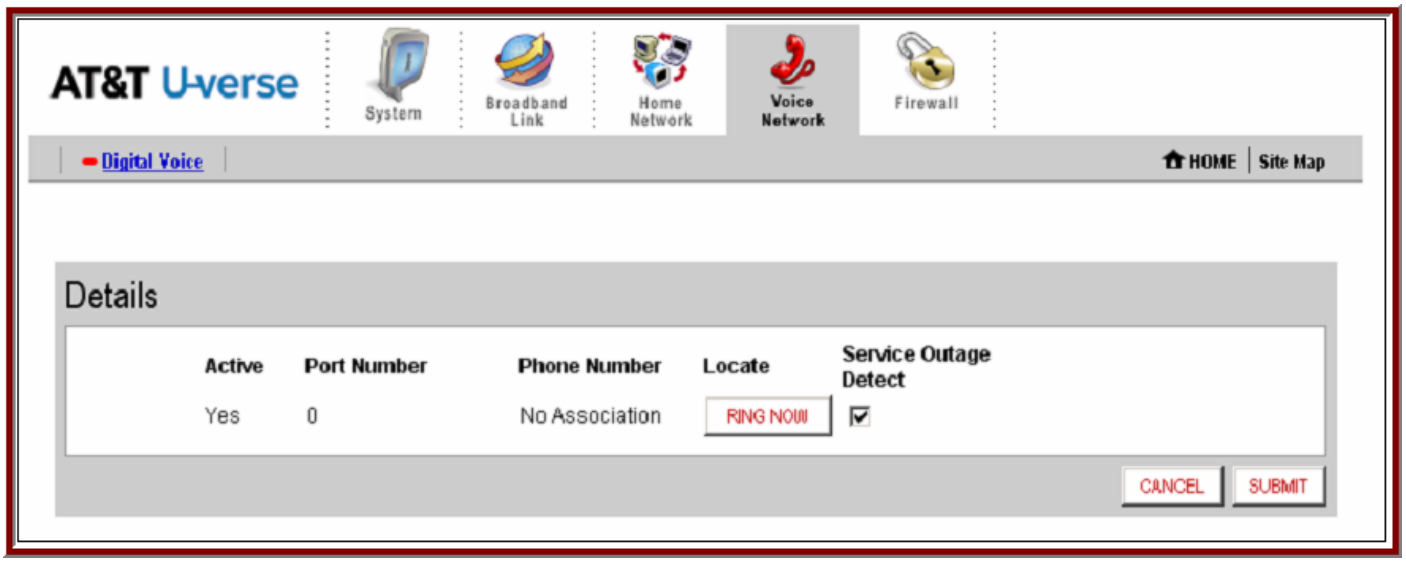
10.9. Reference 9 - Screen Shot 2 “Service Outage Detect”

Figure 37: Screen Shot 2.png



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10.10. Reference 10 - 911 Acknowledgement Electrical Power Excerpt

A full version of the 911 Acknowledgement document can be found by following the link within section 11.

Figure 38: Electrical Power excerpt

Electrical Power. Historically, telephone service has been powered by electrical power within the telephone network. By contrast, U-verse Voice is powered by electrical power in your home.

1. **If you have an Optical Network Terminal (ONT)**--a box typically located on the side of your house, where AT&T's fiber network terminates--you also have a power supply, typically inside your garage, that powers your ONT. In addition, you have a Residential Gateway (RG) inside your house that uses electrical power to operate all your U-verse services. During a **power outage**, you will not be able to make or receive calls with U-verse Voice, including 911 calls, unless you have a functioning backup battery for both your ONT and your RG. To conserve battery power for U-verse Voice, **DO NOT** use any U-verse service other than U-verse Voice during the power outage. AT&T recommends that you use a corded phone with U-verse Voice during a power outage. (Cordless phones require electrical power to work and may not be equipped with backup batteries). AT&T also recommends that you always have an alternative means of accessing 911 during a power outage, such as via a cellular phone.

2. **If you do not have an ONT,** you do not have a power supply for the ONT. Instead, you have a Network Interface Device (NID)--a box typically located on the side of your house, where AT&T's network terminates. You also have a Residential Gateway (RG) inside your house that uses electrical power to operate all your U-verse services. During a **power outage**, you will not be able to make or receive calls, including 911 calls, unless you have a functioning backup battery for your RG. To conserve battery power for U-verse Voice, **DO NOT** use any U-verse service other than U-verse Voice during the power outage. AT&T recommends that you use a corded phone with U-verse Voice during a power outage. (Cordless phones require electrical power to work and may not be equipped with backup batteries). AT&T also recommends that you always have an alternative means of accessing 911 during a power outage, such as via a cellular phone.

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10.10.1. Battery backup acknowledgement

The Premises Technician will discuss the responsibilities that need to be covered when the customer has both the APC and Belkin batteries installed in their home. The Premises Technician will provide and cover the letter in figure 39 with the customer, and identify the locations where both batteries are located in the home. The Premises Technician will recommend that they call APC and replace the ONT battery if steps 2 and 3 should occur (Step 1 will always have a new battery installed).

1. On a new FTTP install, which would include IPTV, HISA, and U-verse voice
2. The customer already has FTTP U-verse service and is adding U-verse voice to his existing U-verse service.
3. When a new customer is moving into a pre-existing FTTP location (which may or may not have had previous U-verse services).

NOTE:
This letter will need to be copied from the U-verse web site for the premises technician to cover with the customer at:
http://dataservices.sbc.com/lps/Job%20Aids/voip/Battery%20Back-Up%20Handout%20FTTP%20ONT_12-6-07.pdf

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Figure 39: Battery backup acknowledgement

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Important Customer Information Regarding your AT&T Voice Service

Please retain for your records

The following is important follow-up information from AT&T. Please retain this information for your records.

Required Optical Network Terminal Battery Backup Power. Your AT&T voice service requires electrical power from your home to operate. Electricity from your home powers the Optical Network Terminal (ONT), an equipment box typically installed on the outside of your home, where AT&T's fiber network terminates and inside wiring for your home originates. AT&T provides a power supply unit for the ONT, which is installed inside your home or garage. AT&T also provides an initial backup battery for the power supply unit to the first resident who orders AT&T services at a premises. (If a prior resident of your premises was the first resident to order AT&T services, you are responsible for purchasing a replacement battery).

If a power outage occurs, you will not be able to make or receive calls, including 911 calls, unless you have battery backup power for the ONT. To conserve battery power, you should not use Internet service during a power outage. (If you have AT&T U-verse Voice service, there is an additional requirement for Residential Gateway battery backup power—see note below).

Optical Network Terminal Backup Battery Replacement. You will need to replace the backup battery when necessary. You may purchase replacements through APC, the vendor, by calling 1-800-800-4APC or 1-800-800-4272, which appears on the power supply label, or you may purchase replacements through another vendor.

When you contact APC, please choose the **"Battery Replacement"** option so that validation of your warranty can be completed. You will be asked for the Model number and Serial number of the power supply unit. This information is located on a decal behind the power plug found under the power supply unit cover. You will need to unplug the power cord inside the unit to view this decal.

How to tell when to replace your battery
There are three status lights on the front-right of the power supply unit. The status light on the far right will be red if the battery is either not connected or needs to be replaced.

If you also have an audible alarm, the alarm will sound and then chirp once every five minutes if the battery needs to be replaced. (When the power supply begins using battery power, it will also sound an alarm, then chirp four times and remain silent. While running on battery power, if the battery begins to run low, the alarm will sound and then chirp four times every five minutes).

NOTE: If you have AT&T U-verse Voice service, you must also have battery backup power for the Residential Gateway for your AT&T U-verse Voice service to function during a power outage. Refer to your Feature Guide, your 911 Acknowledgement, and your Belkin® | Residential Gateway Battery Backup User Manual for more information.

NOTE: If you have a monitored home alarm that uses AT&T voice or Internet service as the communications pathway, your monitored home alarm will not function during a power outage without battery backup power for your AT&T voice or Internet service, as applicable. (AT&T Yahoo! High Speed Internet service requires ONT battery backup power, and AT&T Yahoo! High Speed Internet U-verse Enabled requires both ONT and Residential Gateway battery backup power, to function during a power outage).

If you have any additional questions, please call _1-800-ATT-2020___

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10.11. Reference 11 - Installation Steps for the BBU

See section 11 for a link to the entire user manual for the Belkin Battery Back Up Unit.

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Figure 40: BBu Install Steps

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Installation

NOTE: Before installation, please inspect the RG Battery Backup. Make sure that nothing inside the package is damaged. The RG Battery Backup must be installed near the Residential Gateway and be easily accessible.

STEP 1:

Connect to AC Utility Power

Make sure that the power switch on the RG Battery Backup is in the OFF position. Plug the AC cord on the RG Battery Backup into a wall outlet.

STEP 2:

Connect to the Residential Gateway

Connect the DC plug on the RG Battery Backup into the Residential Gateway.

STEP 3:

Turning on the RG Battery Backup

Turn the switch on the RG Battery Backup to the ON position. The "ON A/C" LED light should illuminate. Note that the "ON A/C" LED will flash for five seconds as the unit performs a self-test. This is normal.

NOTE: It takes approximately 18 hours to charge a new, fully depleted battery at normal indoor temperatures. If a power outage occurs before the battery is fully charged, the battery-backup time shown on page 11 will be reduced. Therefore, you should not rely on battery-backup power for at least 18 hours after your RG Battery Backup is initially installed or a replacement battery is thereafter installed. During these periods especially, and at all other times in general, you should ensure that you have an alternative means of dialing 911, such as via a cellular telephone. Your AT&T U-verse℠ Voice service, including 911 dialing, will not function without electrical or battery-backup power.

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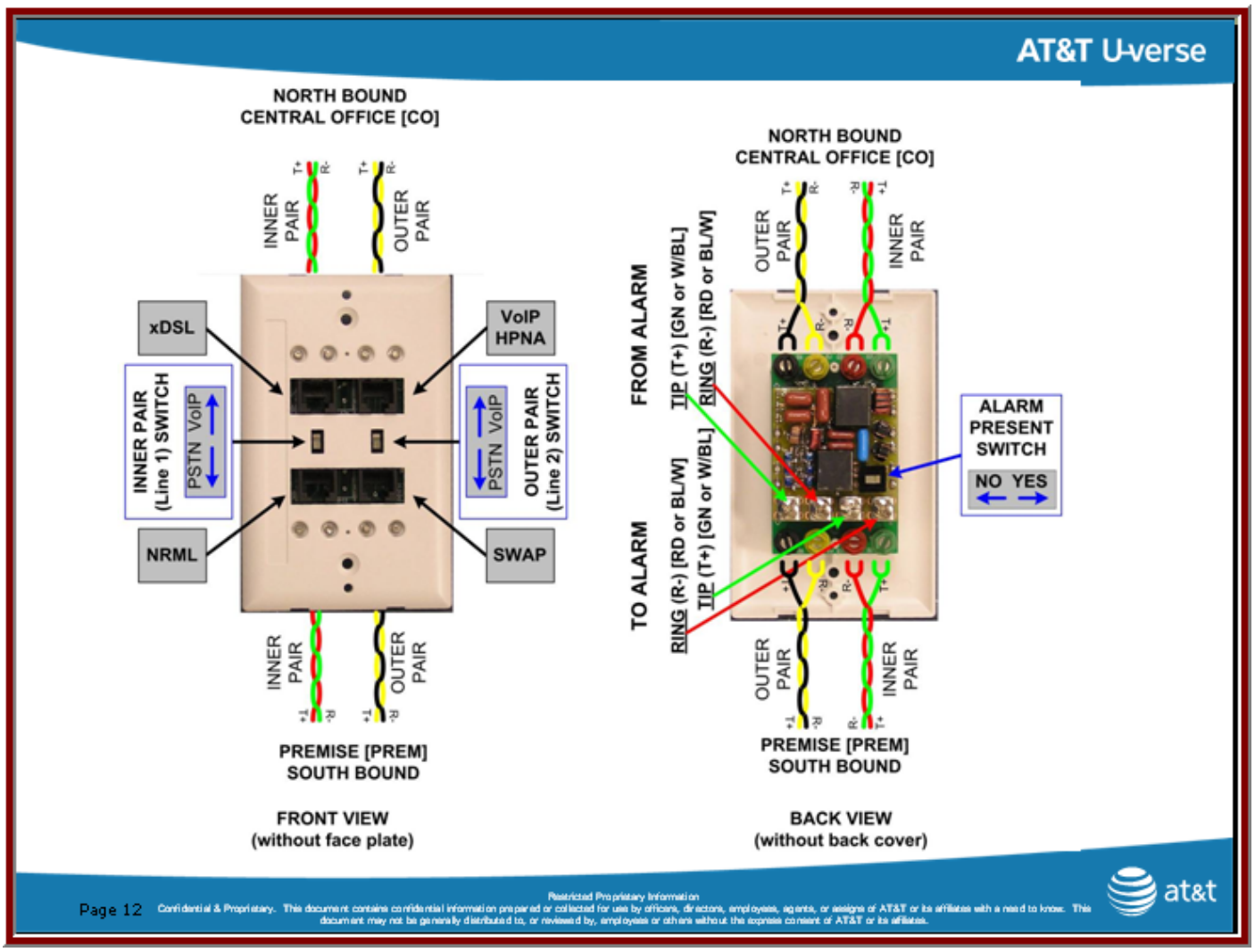
10.12. Reference 12: Wall Plate Splitter Filter 4 Port

Wall Plate Splitter Filter Actual View

Figure 41: Wall Plate Splitter Filter 4 Port



10.13. Reference 13: U-verse Voice Activation Sequence

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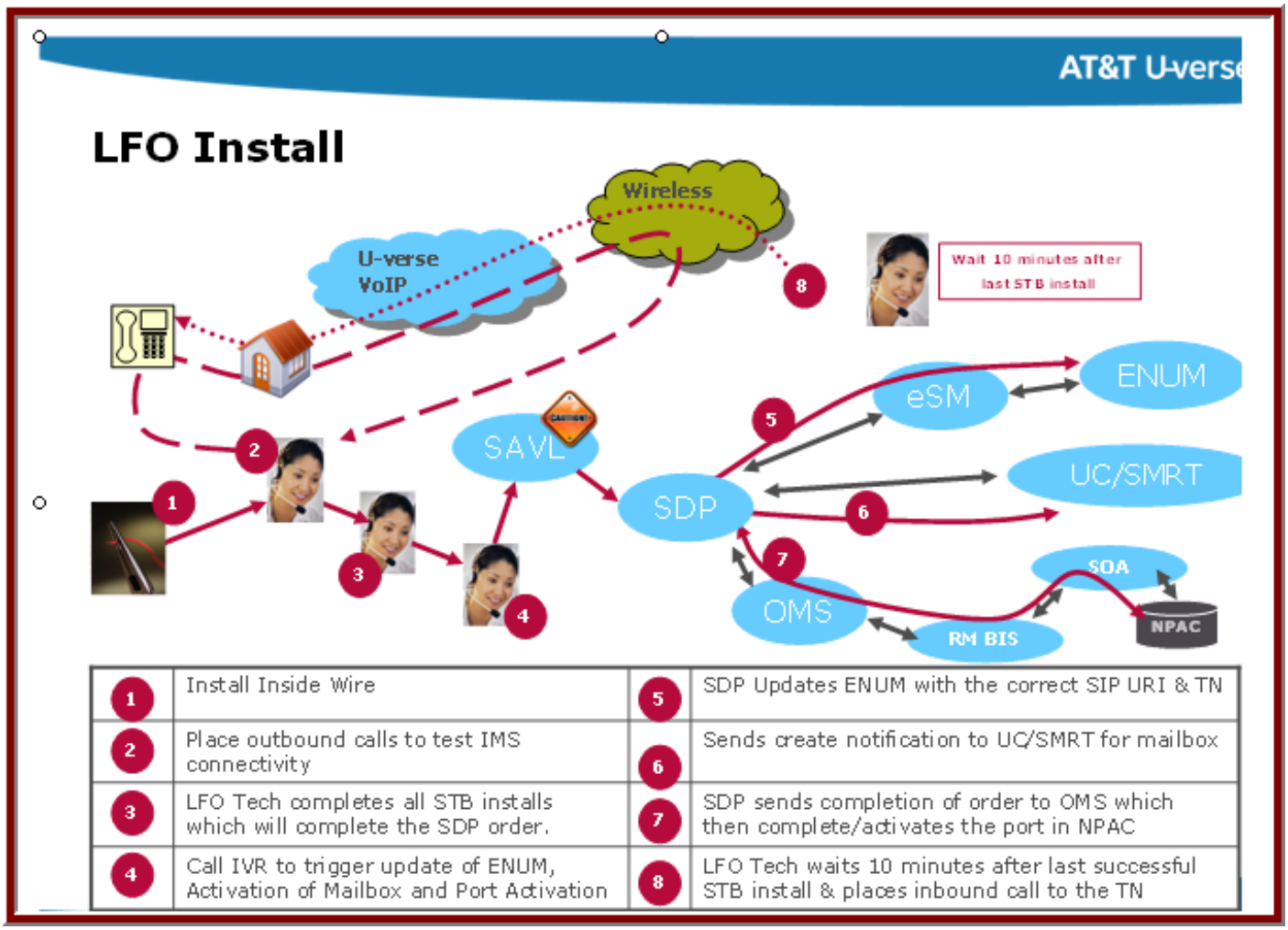
Figure 42: U-verse Voice Activation



U-verse Voice Activation Sequence

10.14. Reference 14: U-verse Voice Check list

This is the Check List of items that needs to be completed and turned into your manager after each U-verse voice install to verify all steps have been completed

The printable version can be found in the U-verse web site:
http://dataservices.sbc.com/lps/Job%20Aids/voip/U-verse%20Voice%20Checklist.pdf

U-verse Voice Checklist

UV Checklist.doc

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11. Related Documents

This is a list of Related Documents for this Methods and Procedures Document:

(A printable version of all these documents can be found in the U-verse web site:
http://dataservices.sbc.com/lps/Job%20Aids/voip/U-verse%20Voice%20Checklist.pdf)

1. U-verse Installation M&P - APEx Document = ATT-TELCO-IS-002-300-034

2. Billing M&P - APEx Document = ATT-TELCO-IS-002-300-050

3. ACCEPTANCE FORM FOR TERMS OF SERVICE FOR PURCHASE AND USE OF AT U-VERSE VOICE AND/ OR AT U-VERSE TV

   081507 U-verse Voice IPTV Acceptance Form for R5.doc
   You may download this file from the online version of this document.
   Note: You must have the proper application in order to open the file.

4. 911 ACKNOWLEDGEMENT

   081507 U-verse Voice 911 Acknowledgement for R5.doc
   You may download this file from the online version of this document.
   Note: You must have the proper application in order to open the file.

5. Battery Back-Up User Manual and Wall Mounting Instruction

   Battery Back-Up User Manual.pdf
   You may download this file from the online version of this document.
   Note: You must have the proper application in order to open the file.

6. U-verse Messaging Job Aid - ”Creating a U-verse Messaging Mailbox”

   Creating a U-verse Voice Mailbox 6-23-08.pdf
   You may download this file from the online version of this document.
   Note: You must have the proper application in order to open the file.

7. U-verse Voice Order Handling

   U-verse Voice Order Issues LFO Handling Process v7.doc
   You may download this file from the online version of this document.
   Note: You must have the proper application in order to open the file.

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12. SAVL IVR User Interface Call Examples

This section outlines examples of how calls will be handled by the Service Activation for VoIP Lines (SAVL) application. The examples are listed by module and are representative only. They do not represent the exact logic of the call flow.

12.1. Call Example 1: Customer wants to activate a TN, one TN awaiting activation is returned, activation is processed successfully

Figure 43: Call Example 1

EACR:	"Okay, then please enter or say the phone number you would like to activate."
Caller:	"512-477-1234"
SAVL:	"Your telephone number has been successfully activated."
Caller:	"Please refer to your self-install kit for instructions on how to test your new phone line. And remember, you can visit u-verse dot a-t-t dot com for help at any time. <slight pause> Would you like to hear this message again?"
Caller:	"No"
SAVL:	"Thank you for calling AT&T. Goodbye."

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12.2. Call Example 2: Technician wants to activate a TN, multiple TN's awaiting activation are returned, activation is processed successfully

Figure 44: Call Example 2

EACR:	"Okay, then please enter or say the phone number you would like to activate."
Caller:	"512-477-1234"
SAVL:	"I show that you have four phone numbers on your account, including the one you gave me. Would you like to activate all of them right now?"
Caller:	"Yes"
SAVL:	"All of your telephone numbers have been successfully activated."
Caller:	"Please refer to your self-install kit for instructions on how to test your new phone line. And remember, you can visit u-verse dot a-t-t dot com for help at any time. <slight pause> Would you like to hear this message again?"
Caller:	"No"
SAVL:	"Thank you for calling AT&T. Goodbye."

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12.3. Call Example 3: Customer wants to activate a TN, multiple TN's awaiting activation are returned, activation returns a partial success, customer retries activation, after 3rd failure customer is transferred to an agent

Figure 45: Call Example 3

EACR:	"Okay, then please enter or say the phone number you would like to activate."
Caller:	"512-477-1234"
SAVL:	"I show that you have three phone numbers on your account, including the one you gave me. Would you like to activate all of them right now?"
Caller:	"Yes"
SAVL:	"Unfortunately, only some of the phone numbers you wanted to activate could be activated. I'll read you each phone number you asked to be activated and the activation status of each."
SAVL:	"The first phone number is 512-477-1234. It was successfully activated."
SAVL:	"The second phone number is 512-477-1235. It was not activated due to a system error."
SAVL:	"The third phone number is 512-477-1236. It was successfully activated."
SAVL:	"To hear that again, say "repeat that." Otherwise, would you like to retry the activation for the phone numbers that weren't activated?"
Caller:	"Yes"
SAVL:	"We were unable to activate your phone number due to a system error. Would you like to retry the activation?"
Caller:	"Yes"
SAVL:	"You have exceeded the number of retry activations allowed."
EACR:	"One moment, please, while I connect you to someone who can help you."

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12.4. Call Example 4: Technician wants to activate a TN, multiple TN's awaiting activation are returned, activation returns a failure, technician declines to retry activation, technician enters second TN for activation, one TN awaiting activation is returned, activation is processed successfully

Figure 46: Call Example 4

EACR:	"Okay, then please enter or say the phone number you would like to activate."
Caller:	"512-477-1234"
SAVL:	"I show that you have three phone numbers on your account, including the one you gave me. Would you like to activate all of them right now?"
Caller:	"Yes"
SAVL:	"We were unable to active your phone numbers due to a system error. Would you like to retry the activation?"
Caller:	"No"
SAVL:	"Would you like to enter another telephone number for activation?"
Caller:	"Yes"
SAVL:	"Please say or enter the next telephone number that you would like to activate."
Caller:	"512-477-1235"
SAVL:	"Your telephone number has been successfully activated."
SAVL:	"Please refer to your self-install kit for instructions on how to test your new phone line. And remember, you can visit u-verse dot a-t-t dot com for help at any time. <slight pause> Would you like to hear this message again?"
Caller:	"No"
SAVL:	"Thank you for calling AT&T. Goodbye."

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12.5. Call Example 5: Technician wants to activate a TN, multiple TN's awaiting activation are returned, customer chooses to activate one TN at a time, activation is processed successfully

Figure 47: Call Example 5

EACR:	"Okay, then please enter or say the phone number you would like to activate."
Caller:	"512-477-1234"
SAVL:	"I show that you have two phone numbers on your account, including the one you gave me. Would you like to activate all of them right now?"
Caller:	"No"
SAVL:	"Alright, I'll say each of the phone numbers that are ready for activation. To choose that one for activation, you can say "yes" at any time."
SAVL:	"Okay, area code 512-477-1234. Would you like to activate this number?"
Caller:	"Yes"
SAVL:	"Okay, area code 512-477-1235. Would you like to activate this number?"
Caller:	"No"
SAVL:	"Note that any phone numbers not activated by you today will be automatically activated by the system at 10 PM local time. <pause> Please hold while I activate the numbers that you selected."
SAVL:	"All of you telephone numbers have been successfully activated."
SAVL:	"Please refer to your self-install kit for instructions on how to test your new phone line. And remember, you can visit u-verse dot a-t-t dot com for help at any time. <slight pause> Would you like to hear this message again?"
Caller:	"No"
SAVL:	"Thank you for calling AT&T. Goodbye."

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12.6. Call Example 6: Technician wants to activate a TN, multiple TN's already activated are returned

Figure 48: Call Example 6

EACR:	"Okay, then please enter or say the phone number you would like to activate."
Caller:	"512-477-1234"
SAVL:	"Okay, the following phone numbers have been activated."
SAVL:	"512-477-1234"
SAVL:	"Second number: 512-477-1235"
SAVL:	"This step of the installation process is complete."
SAVL:	"Please refer to your self-install kit for instructions on how to test your new phone line. And remember, you can visit u-verse dot a-t-t dot com for help at any time. <slight pause> Would you like to hear this message again?"
Caller:	"No"
SAVL:	"Thank you for calling AT&T. Goodbye."

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12.7. Call Example 7: Technician wants to activate a TN, multiple TN's (none of which are awaiting activation) are returned, technician asks for status messages to be repeated, technician is transferred to an agent

Figure 49: Call Example 7

EACR:	"Okay, then please enter or say the phone number you would like to activate."
Caller:	"512-477-1234"
SAVL:	"I show that you have one phone number whose activation is already complete and one phone number whose activation is not ready at this time.
SAVL:	"There are no phone numbers that can be activated at this time. To hear the status of each phone number, say "check status." Or, to speak with someone about the phone number that is not ready yet, say "agent."
Caller:	"Check status"
SAVL:	"Okay, now I'll read you each of the phone numbers on your account and the status I found for each."
SAVL:	"The first phone number is 512-477-1234, with a status of activation is complete."
SAVL:	"The second phone number is 512-477-1235, with a status of not ready for activation."
SAVL:	"Again, I show that you have one phone number whose activation is already complete and one phone number whose activation is not ready at this time."
SAVL:	"There are no phone numbers that can be activated at this time. To hear the status of each phone number, say "check status." Or, to speak with someone about the phone number that is not ready yet, say "agent."
Caller:	"Agent"
EACR:	"One moment, please, while I connect you to someone who can help you."

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13. Contact List

Name	ATTUID	Phone #	Department / Responsibility
Timothy M. Berner	tb2923	312–727–4816	Area Mgr. U-verse
Installation Support Tier Two Team		866-757-9808	
UVDC SW/East		866-351-6364	
UVDC West		866-247-1607	
UVDC MW		866-268-8766	
David Arreguin	da3906	210–471–0023	Area Mgr.U-verse
Brink's Home Security - For new customer		1-888-827-9661	U-verse specific phone numbers for the customers of alarm company - 24 hours a day, 7 days a week
Brink's Home Security - For existing customer		1–800–423–0895	U-verse specific phone numbers for the customers of alarm company - 24 hours a day, 7 days a week

Acronyms

A.1. Acronyms Dictionary

Refer to ATT-000-000-020, Acronyms Dictionary.

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