

Presentation

# Designing Device Design Deliverables

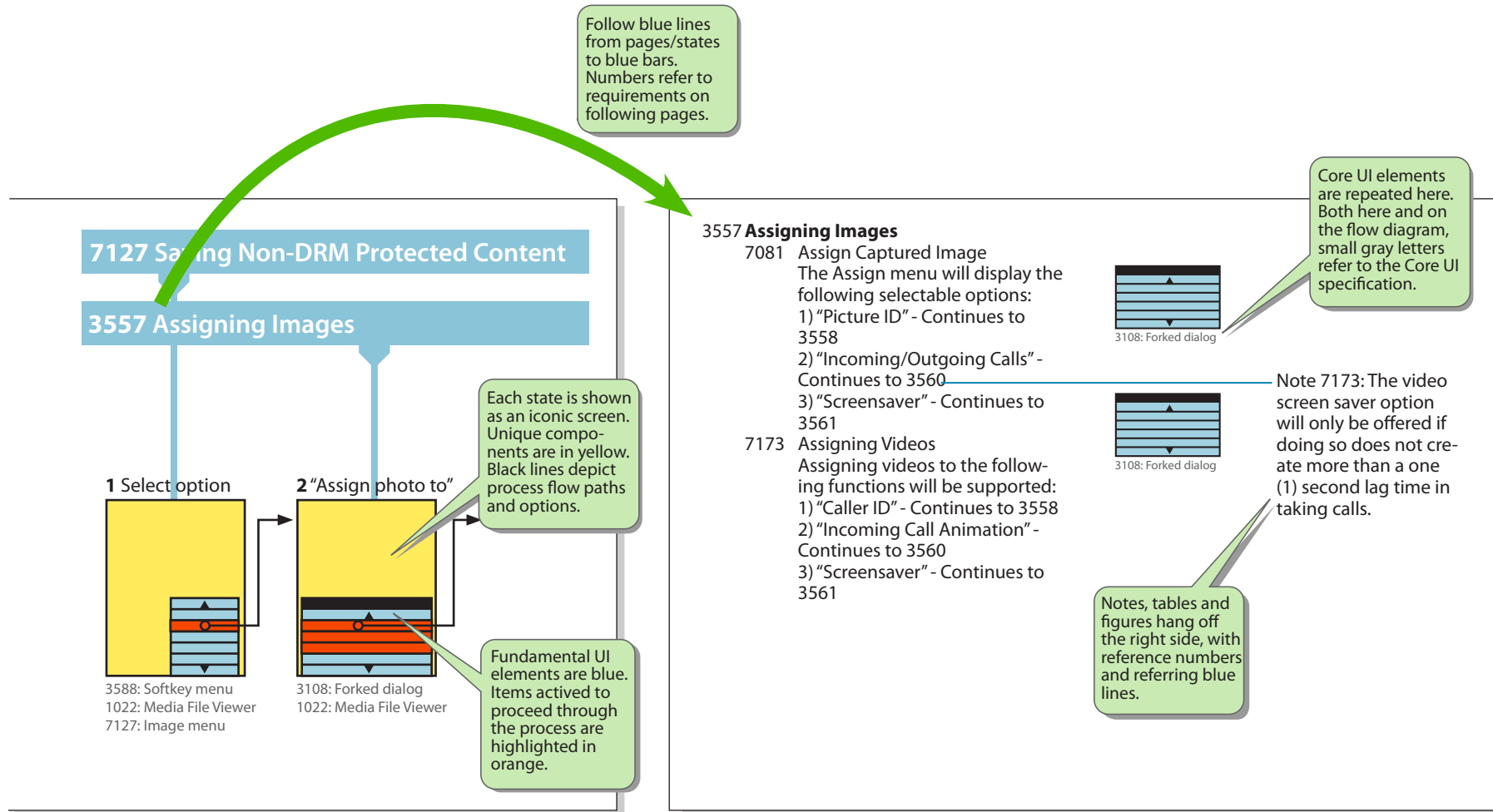
Prepared for **Design for Mobile 2010**

*17 September 2010*

# Introduction (Continued)

This entire document is relational. Each component refers to other components or sections. Most follow a standard organizational method described below.

Certain early sections, defining the behavior of the re-usable modules, appear in slightly different formats. All requirements are regardless written and listed in the same manner, preceded with a number and title.



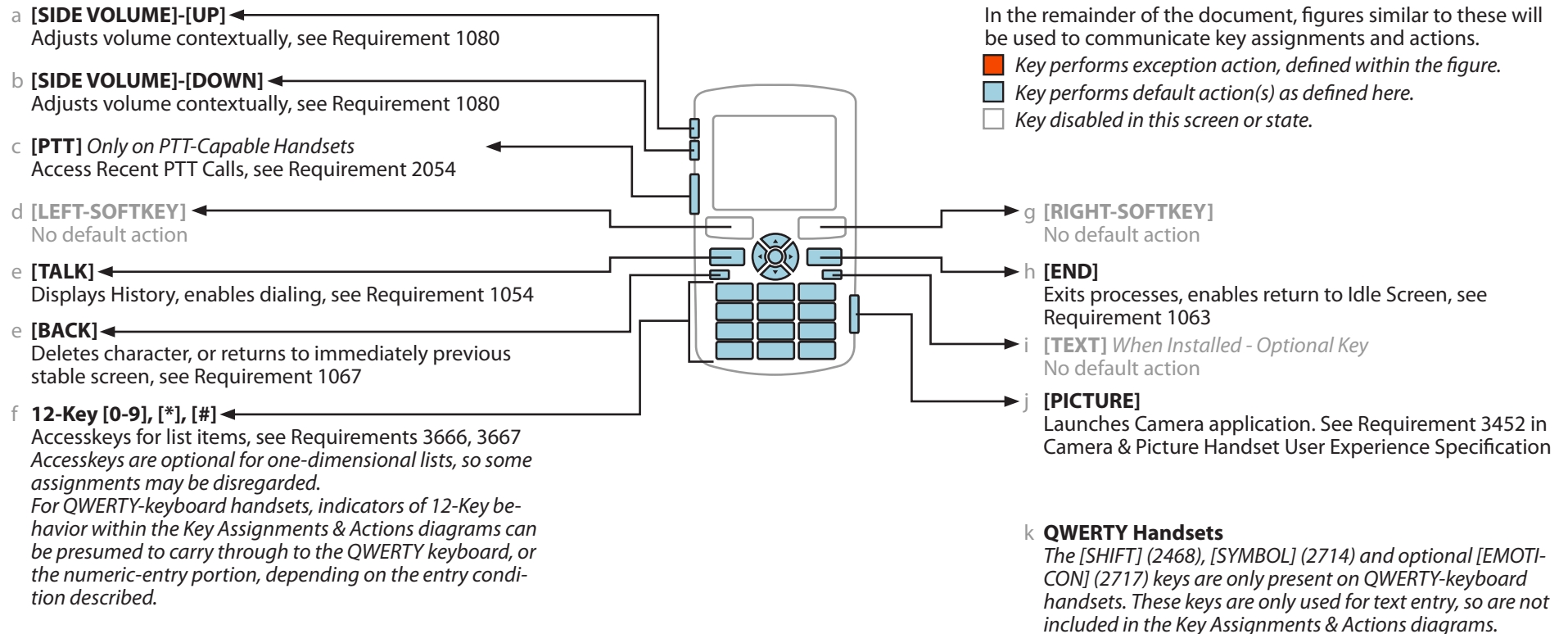
# Common Features *(Continued)*

## 3644 Common Interactive Click Behaviors

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Most button, softkey and on-screen element behaviors are re-used and repeated in a predictable manner throughout the interface. The most common interface elements are summarized in the table to the right. Details of these most common behaviors are described in the following requirements on keys and screen elements.

Figure 3544 - Default Key Assignments & Actions





1278

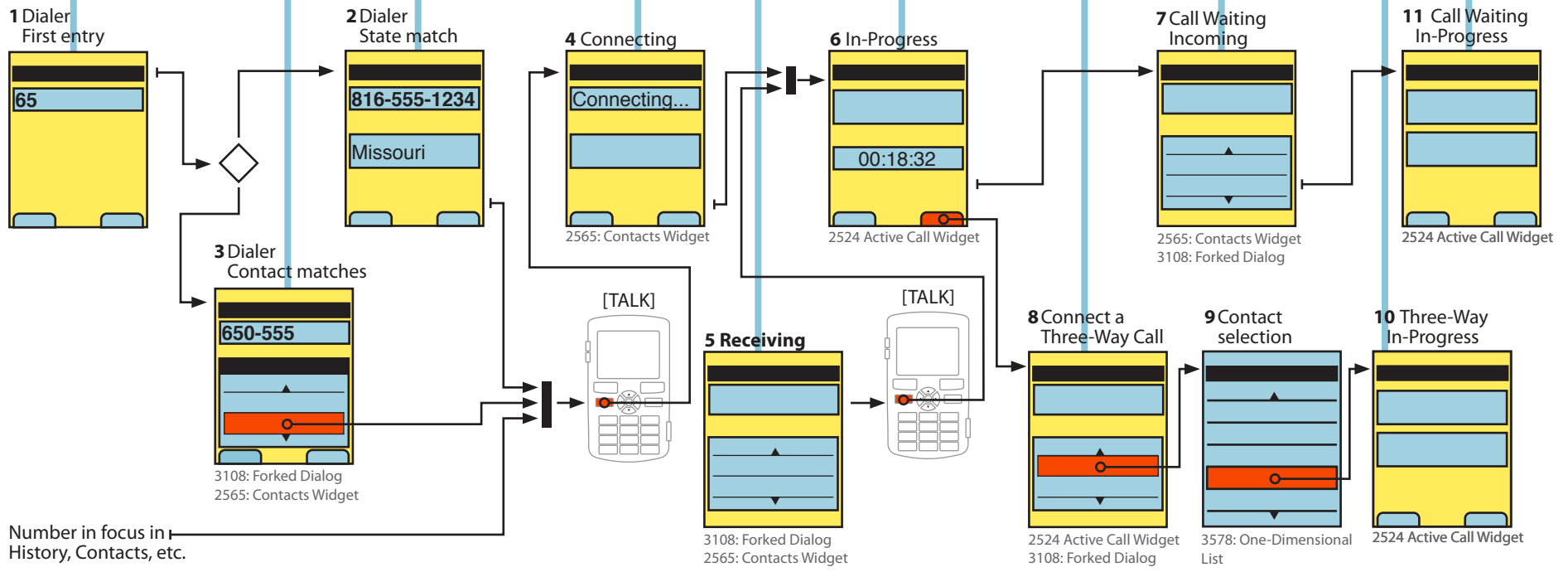
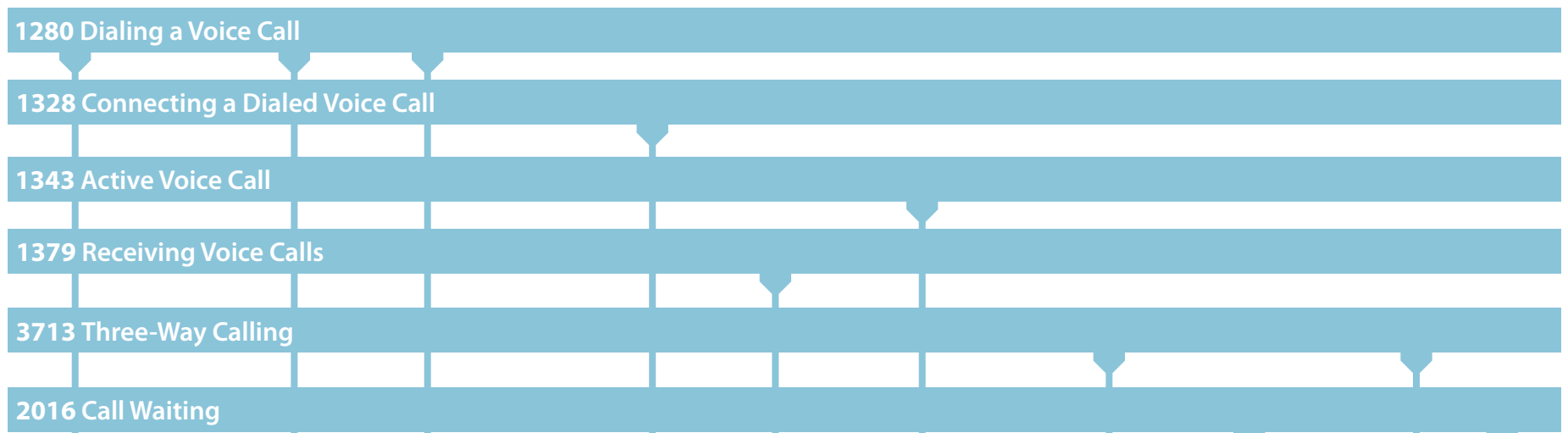
# Placing and Receiving Voice Calls

1278 **Placing and Receiving Voice Calls**

# 1278 Placing and Receiving Voice Calls — Principal Elements and Processes

Applicable UI Requirements  
See following pages for listed requirements

States & Processes  
Elements discussed here  
Action performed



# 3706 Basic Dialing Features and Behaviors

## 3706 Basic Dialing Features and Behaviors

### 4704 Emergency & Special Numbers

Emergency and Special Numbers will be configured via the PRI.

### 1292 Hyphenation

#### 1293 Automatic Hyphenation Based on NANP

The handset will have an automatic hyphenation feature based on the North American Numbering Plan.

#### 1294 Star Code Support

The handset will support Star-Code Call Origination.

#### 1295 No Hyphens After Pauses

When dialing a Phone Number the digits after any pause will not be hyphenated.

#### 1296 Left-to-Right Digit Display

When dialing a Phone Number, display of digit entry is to be from left to right.

#### 1297 Treatment of Numeral One Prefix

When dialing a Phone Number, if "1" (one) is entered before the area code, the Phone Number will be hyphenated as: "1 - XXX - XXX - XXXX"

#### 1298 Support for Long Numbers

Call origination will be supported up to 40 digits. Pauses are to be counted as a digit.

#### 1299 Soft and Hard Pause Support

The handset will support both "Soft" pauses and "Hard" pauses.

#### 1300 Hyphenation Exception for Long Numbers with Pauses

If a Phone Number of eleven digits or more is entered before a pause, all hyphens are to be removed and additional characters entered are to remain unhyphenated.

Example 1296:

8\_ (speed dial)

81\_ (speed dial)

816\_

8165\_ (4-digit dial/abbreviated dialing)

81655\_ (5-digit abbreviated dialing)

816-559\_

816-5598\_

816-559-89\_

816-559-8989

Note 1297: Some digits may overflow to the next line

Note 1299:

"Soft" Pauses: two seconds

"Hard" Pauses: wait for user input

### 1361 **Hard Pause**

#### 1362 Hard Pause Dialog

When a dialed Phone Number contains a Hard pause, once the call is connected a Pop-Up menu will be presented with the following features:

- 1) "Send additional tones"
- 2) The numeric values after the pause which will be sent
- 3) The Left-Softkey labeled "Send Tones" which will immediately send the next group of numbers as audible DTMF tones
- 4) The Right-Softkey labeled "Cancel" which will dismiss the dialog, and continue with the call as dialed"

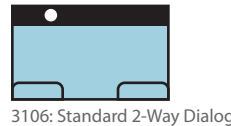
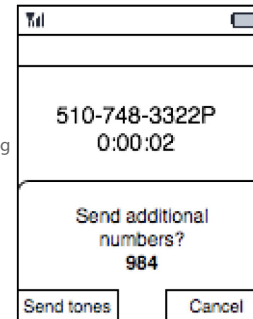


Figure 1361: Hard Pause Dialog



Note 1362: The "next group" referred to in item #3 means the remaining numbers, unless there is another hard pause, in which case just the numbers until that pause, and then another Pop-Up dialog will be presented.

### 1301 **Prepending**

#### 1928 Prepending Support

A function will be provided to allow prepending of numeric values, as well as symbols, to recalled Phone Numbers, prior to placing a call.

#### 1302 Prepend Launches Dialer

Any prepend action will launch the Dialer function, place the number into the Dialer field and place the cursor at the beginning of the number

Example 1301: "11 plus MIN for direct access to recipient's VM" & "\*67 plus recipient's MIN for Caller ID blocked on recipient's handset."

Example 1928:  
Prepend Digits: Area codes or network feature activation codes  
Prepend Symbols: "\*", "#", or "+"

Note 1928: Phone numbers can be recalled from Contacts, Call Logs, or Messages.

## 2354 Plus Code (International) Dialing

### 2357 Default IDP

The default IDP is 011. This will be set by the PRI.

### 1304 Typing a Plus Code

From the Idle Screen, pressing and holding the [0] key will display a plus symbol, or “+” in the “Number Entry” field.

### 1307 Plus Symbol Display

When in the Number Entry field, a plus symbol entered as a part of a phone number, will always be present to the left of the first entered number.

### 1309 Plus Symbol in History

If a plus symbol is used when dialing a number, is to be reflected in the Outgoing Call Log.

### 3647 Plus Code Dialing for Three-Way Calling

Plus Code Dialing for a Three-way call will be supported.

### 2359 Behavior When Plus Code Dialing Off

When Plus Code Dialing is set to “Off,” all dialed values are sent to the network without modification.

### 2360 Behavior When Plus Code Dialing On

When Plus Code Dialing is set to “On,” dialed values will be analyzed and manipulated as needed before being sent to the network.

### 3709 Handset Plus-Code Behavior in GSM Coverage

When the handset is in GSM coverage, the “+” character will be sent to the network, and not translated to an IDP.

### 3710 Handset Plus-Code Behavior in CDMA Coverage

When the handset is in CDMA coverage, the handset will convert the “+” character to an IDP, and not send the “+” character to the network.

### 3711 Handset Detection of Region

The handset will use the CDMA MCC being broadcast to determine if it is in North-American coverage.

Note 1304: The “plus” symbol will allow the user to make an international call from any country. After the plus symbol has been entered, the user can dial the desired country code, Phone Number, and press the [TALK] key to place the call.

Example 1304: “ + 1 913 555 1212 ”

Example 1309: If a number was dialed with a plus symbol, or “+,” the Outgoing Call Log entry would be formatted as such: “ + 1 - XXX - XXX - XXXX ”

Note 3711: The MCC for North America is 310.





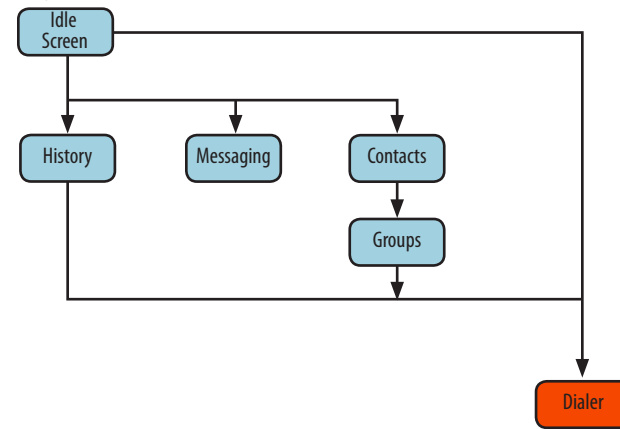
# 3719 Placing a Voice Call

## 3719 Placing a Voice Call

### 1277 Dialer Access is Pervasive

Access to Voice Services will be pervasive throughout the user interface. The dialer may be directly accessed from many locations within the phone in order to place a Voice Call.

Figure 1277: Access to Voice Services



Note 1277: Calls may be initiated as contextually appropriate throughout History, Contacts, Group, and Messaging and from the Idle Screen. Calls may also be initiated from any other applications which may include this feature. Alerts related to Voice Services, such as "Incoming Call," may appear anywhere within the user interface as long as the network is available to transmit the alert and the handset is capable of receiving the alert.

# 3719 Placing a Voice Call *(Continued)*

## 1280 Dialing a Voice Call

### 1281 Dialer Key Functionality

The Dialer function will allow manual entry of a Phone Number.

### 1287 Dialer Entry Field

The Dialer function will provide a field for entry of Phone Numbers.

### 1314 Layout of Dialer Screen

When dialing a Phone Number, the string of entered digits will be displayed higher on the screen than any matching results or other information, and will remain in focus by default.

### 3721 Send Message From Dialer Screen

Within the Dialer screen, once four (4) digits have been entered, the Left-Softkey will become active, and is labeled "Send Msg." Selecting this option will open a Pop-Up menu with the following selectable options:

- 1) "Text Message"
- 2) "MMS"
- 3) "VoiceSMS"

Selecting any of these options will dismiss the Dialer and open the relevant application to a compose screen with the value entered on the Dialer populated into the recipient field."

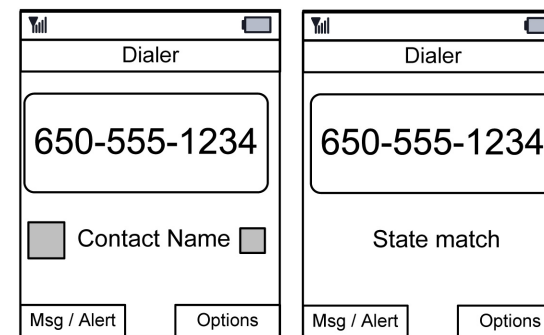
### 3722 Options From Dialer Screen

Within the Dialer screen, the Right-Softkey will be labeled "Options" and contains the following selectable items:

- 1) "Save" see Requirement 3723
- 2) "Hard Pause" which will insert a "P" character into the dialed string as a placeholder for the appropriate action.
- 3) "2sec Pause" which will insert a "T" character into the dialed string as a placeholder for the appropriate action."

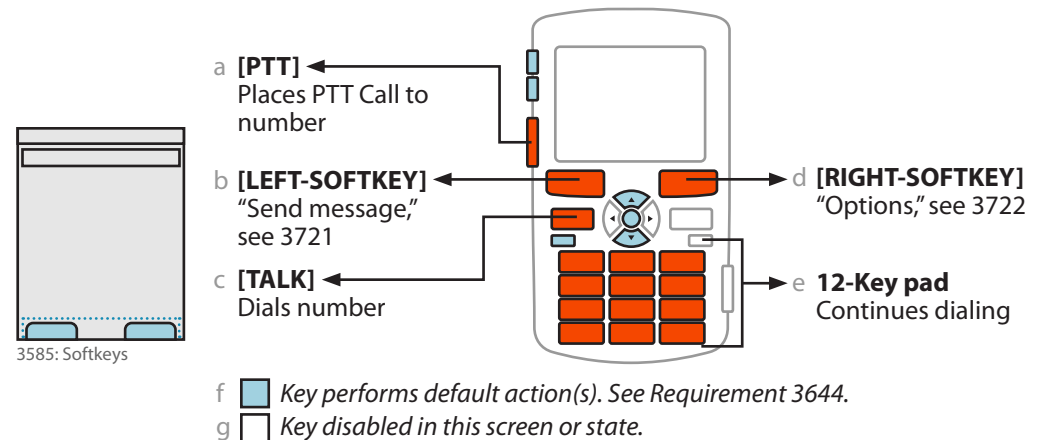
Figure 1280: Dialer Matching

a: Saved Number      b: Unsaved Number



Note 1281: Additional, related functions are discussed as well, such as number matching, which are not strictly manual entry of a complete Phone Number.

Figure 1314: Dialer Screen - Key Assignments & Actions



Note 3721: If space allows, the label may be "Send Message."

3723 Save From Dialer Screen  
From the Dialer screen, when the Save option is selected, a Pop-Up dialog is presented with the following selectable options:

- 1) "New Entry"
- 2) "Existing Entry"

Each of these will load the Contact List into the appropriate state.

1422 Location Matching  
Within the Dialer screen, when a complete valid NANP Phone Number has been entered, the Area Code will be used to determine the corresponding U.S. State, Territory, Protectorate or District. The name of this location will be displayed on the screen.

1288 Contact List Matching  
The Dialer function will display number match information.

1289 Contact Name Display  
In any situation where a Contact name is displayed, as much of the Contact name will be displayed as possible.

1290 Contact Name Truncation Rules  
In any situation where a Contact name is displayed but it will not fit entirely in the space allowed, the Contact name will be truncated by adding an ellipsis to the end of the string. Characters will be removed until the Contact name, in addition to the ellipsis, fits in the given space. The Phone Number type indicator is not to be truncated.

1291 Dialing On Non-Numeric Handsets  
QWERTY handsets that do not have a 12-key keypad will support alphanumeric dialing.

Figure 1422: Dialer Number Match Display: State Match



Note 1288: See Requirement 1414, et. al. for Contact List Matching.

Example 1290: In the following example, the pipe indicates the right side of the screen:

---William Johans|en

Truncating it would not be helpful or clear, and simply adding ellipsis will not help, as they will disappear. Additional characters must be removed to provide space for the ellipsis:

---William Johan...|

And, be sure to provide additional space for items such as number type:

---William Jo(M)...|

Specific spacing values cannot be provided as it depends on the typeface and font on the individual handset.

Note 1290: This also applies anywhere there is a Contact match displayed, including History, Alerts, and Messages

Example 1291: An example of alphanumeric dialing is: (1800FLOWERS).

# 3719 Placing a Voice Call *(Continued)*

# Contact List Matching

## 1414 Dialed Number Contact List Matching

1415 Dialer Number Matching  
From the Idle Screen, during manual entry of a Phone Number, as soon as a Number Match is found, a Dialer Number Match Pop-Up Dialog will be displayed.

1416 Dialer Number Matching Display  
From the Idle Screen, the Dialer Number Match Pop-Up will display a Caller Information Widget for the Contact matched.

2171 Contact List Matching Rules  
When any entered number matches any substring of numbers in a saved Phone Number, Contact List Matching will occur.

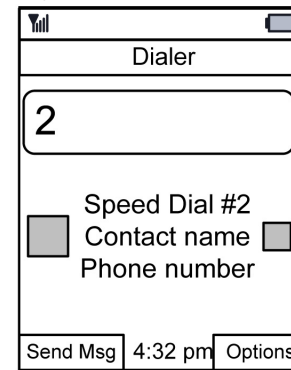
1319 Phonebook Match List Display  
If Phonebook Match is enabled and Abbreviated Dialing is disabled, entry of a 4 to 6 digit string will immediately display a list of phonebook matches.

1320 Phonebook Match List Displays for Any Matches  
If Phonebook Match is enabled, a list of phonebook matches will be displayed for an entered number, even if only one match exists.

1321 Phonebook Match List Has Priority  
In a case where there is insufficient room for both the Phonebook Match list, and the State Name match, the State Name match may be overwritten or discarded when the Phonebook Match list is displayed.



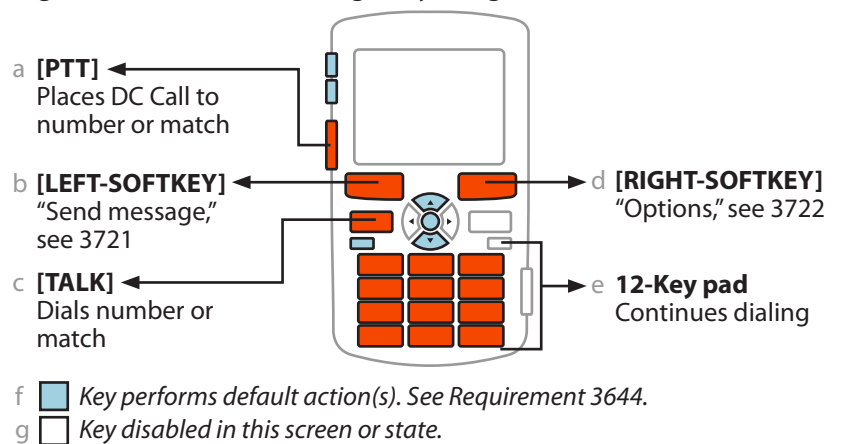
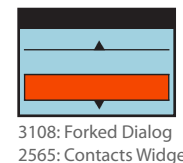
Figure 1415: Dialer Number Match Display



Note 1416: See Requirement 2528, et. al. for general details on the Caller Information Widget.

Example 2171: [7]-[5]-[1] is dialed, the following matches from the phone book could be valid:  
**751-556-7690**    816-**751**-9089    785-232-**7512**    913-487-**5121**

Figure 1319: Dialer Matching - Key Assignments & Actions





# Principles of Designing and Documenting

Clarity

Consistency

Extensibility

Accuracy

Avoid duplication

Reference

Any questions?  
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