

Relative Evaluation Report on S1, iPhone

March 2, 2010

Product Engineering Team
SW Verification Group

PLAINTIFF'S EXHIBIT NO. 44

United States District Court
Northern District of California
No. 11-CV-01846-LHK (PSG)

Apple Inc. v. Samsung Elecs.

Date Admitted: _____ By: _____

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with Lismore's

I. Overall Comments

- A total of 126 issues were found, and 27 new issues were found in S1 (21.4%) and there were 99 issues that overlap with Lismore
- Basic Functions take up the largest percentage of the issues with 21.4%, followed by Visual Interaction Effect (17.5%), Browsing and Messaging (16.7% respectively)

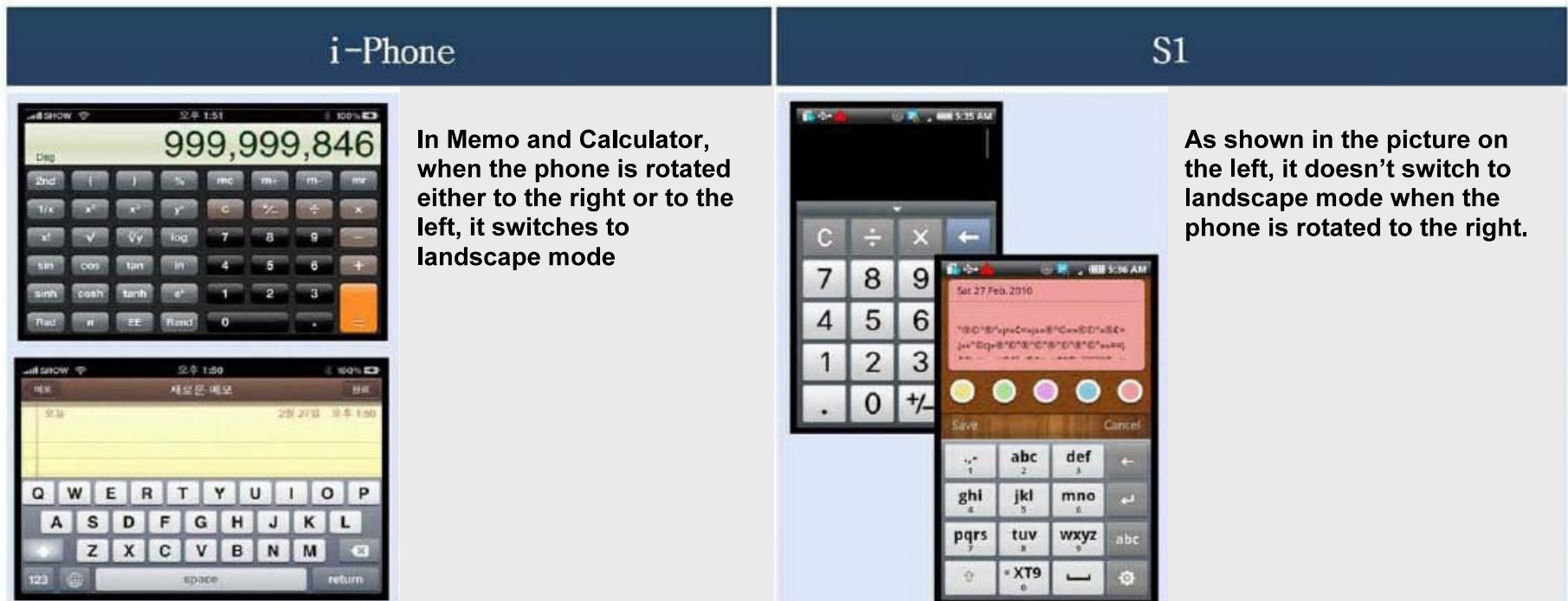
Items	i-Phone	S1
Basic Function (27 items)	Effective and efficient use of space Ex) Shows keypad/font and Calendar schedule in a large view	Has poor use of space for a large LCD Ex) Keypad and font are small, and schedule list field is narrow
Browsing (21 items)	Edit and delete functions are appropriately placed Ex) YouTube search history deletion and addition of countries in weather application Cut & Paste of contents function is supported	There are no edit/delete functions, and there are unnecessary functions Ex) YouTube search history deletion, addition of countries in weather application, and Cut & Paste of contents functions are not supported
Connectivity (19 items)	Easily synchronized with other devices Ex) Can switch to BT while playing music Wi-Fi set up can be configured in one screen	Synchronizing with other devices is complicated and difficult Ex) Can't switch to BT while playing music; Wi-Fi ON/OFF and Setting screens are separately implemented
Messaging (21 items)	Received messages are easily recognized and accessed Ex) The number of received messages is indicated on the email icon Easy to move to previous/next e-mail	Receiving events is difficult to recognize and access Ex) Difficult to recognize because the icon for received E-Mail is black No move button to move to the next e-mail
Multimedia (16 items)	Various convenience functions are offered during playback and editing Ex) Fine tuning during music play and picture Cut & Paste functions are supported Edit function is supported for large-size video files	Lack detailed convenience functions Ex) Music fine tuning and picture copying are not supported Can't attach the desired parts from a large-capacity video file
Visual Interaction Effect (22 items)	Fun factor is increased by adding Effects to even little parts Ex) Effect for saving mails, Screen transition effect for maps	Effects are inserted only for major menus Ex) No effects for moving into folders and for map screen transitions

II. New UX Usability Issues

1. Basic Function _ Memo

In Memo and Calculator, only -90 degree rotation is supported in landscape mode

- i-Phone: Landscape mode is supported both to the right and to the left
- S1: Landscape mode is not supported when rotated to the right in Memo and Calculator.





Directions for Improvement

Landscape mode should be supported whether rotated horizontally to the right or left

2. Basic Function _ Calendar

Improve user convenience through a better utilization of the Calendar screen

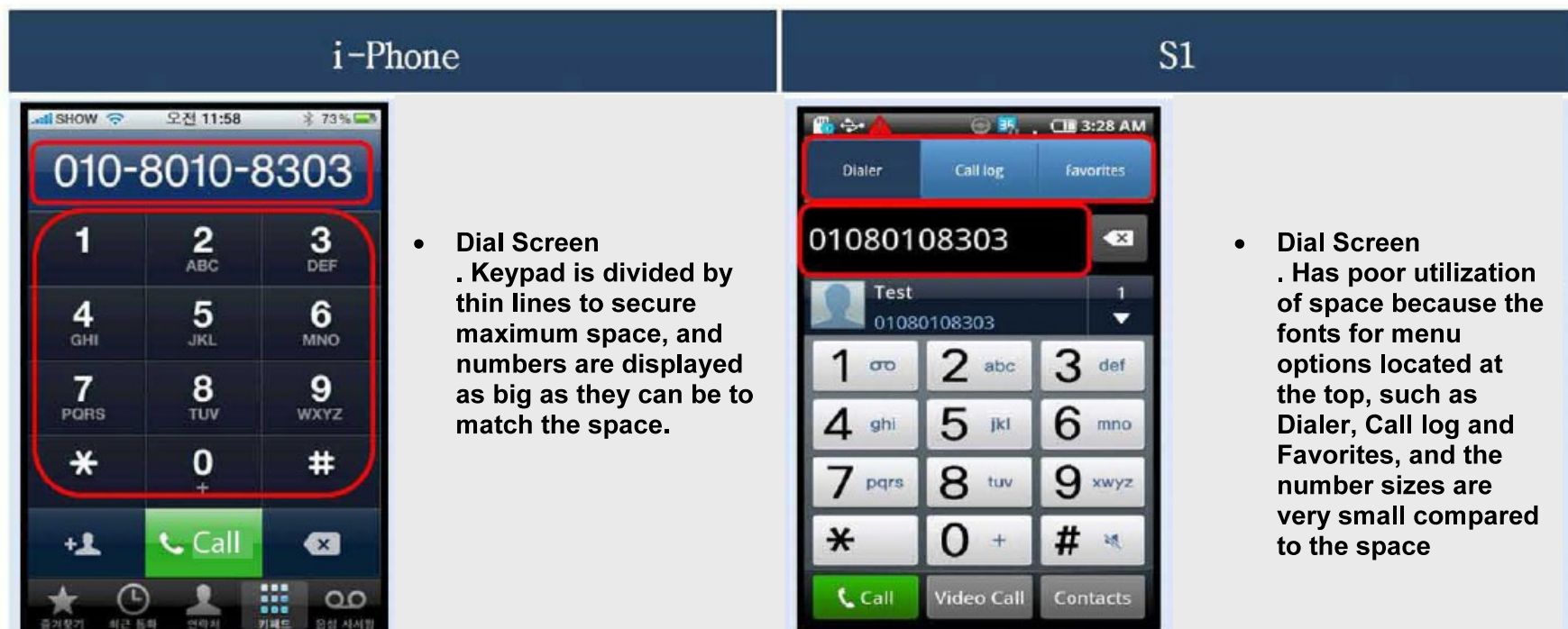
- iPhone: When a date is selected in the monthly view, the daily schedule is displayed.
- S1: Visibility is low because the display area for daily schedule is small

i-Phone	S1
 <p>When a date is selected, daily schedule is displayed on the bottom, so there is no need to click on each day to check the daily schedule</p>	 <p>Ledgibility of the daily schedule is low in monthly view because the display area for daily schedule is small</p>

Directions for Improvement **Need to modify by increasing the size of the daily schedule display area in order to make it ledgible.**

3. Basic Function _ Call

- **Has poor utilization of space in the Dial screen.**
 - i-Phone: Number keypad touch area and number fonts are large so they are easy to press and see
 - S1: Number font and the keypad size are small compared to the LCD size.





Directions for Improvement

Need to enlarge the text in the menu options at the top and the number fonts on Dial screen to match the space

4. Basic Function _ Call

Convenience when ending Calls

- i-Phone : Call can be ended by pressing the Hold button once in any screen during a call.
- S1 : End key has to be pressed after unlocking Hold to end a call.

i-Phone	S1
	
<ul style="list-style-type: none"> • Menu Screen During a Call .When you hold the phone with your left hand during a call, it's very easy to end a Call because your index finger gets placed where the Hold button is located 	<ul style="list-style-type: none"> • Menu Screen During a Call . You have to press Hold once from the LCD-off status and then press the End key on the Call Menu screen

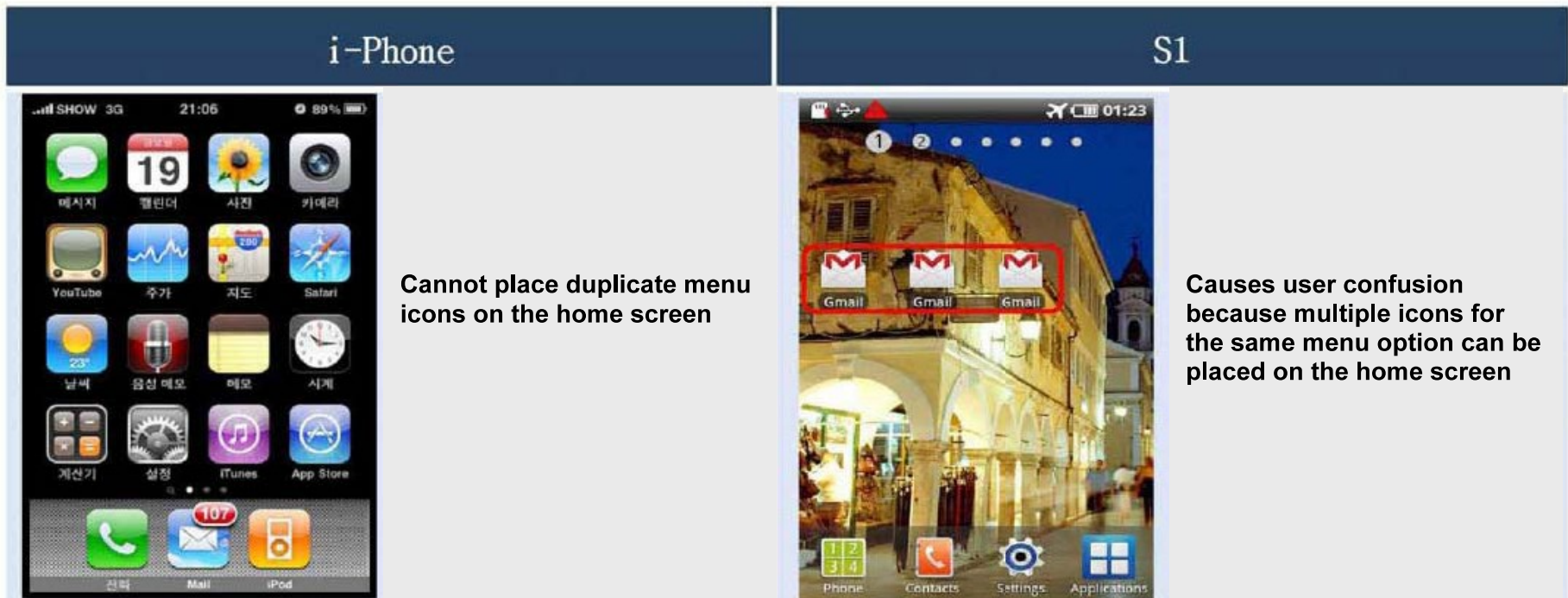
Directions for Improvement

Need to modify so that a Call can be ended using the Hold button

5. Basic Function _ Home Menu

☐ Causes user confusion because duplicate menu icons can be placed on the home screen

- i-Phone: Duplicate menu icons can't be placed on the home screen.
- S1: Causes confusion because duplicate menu icons can be placed in the home screen



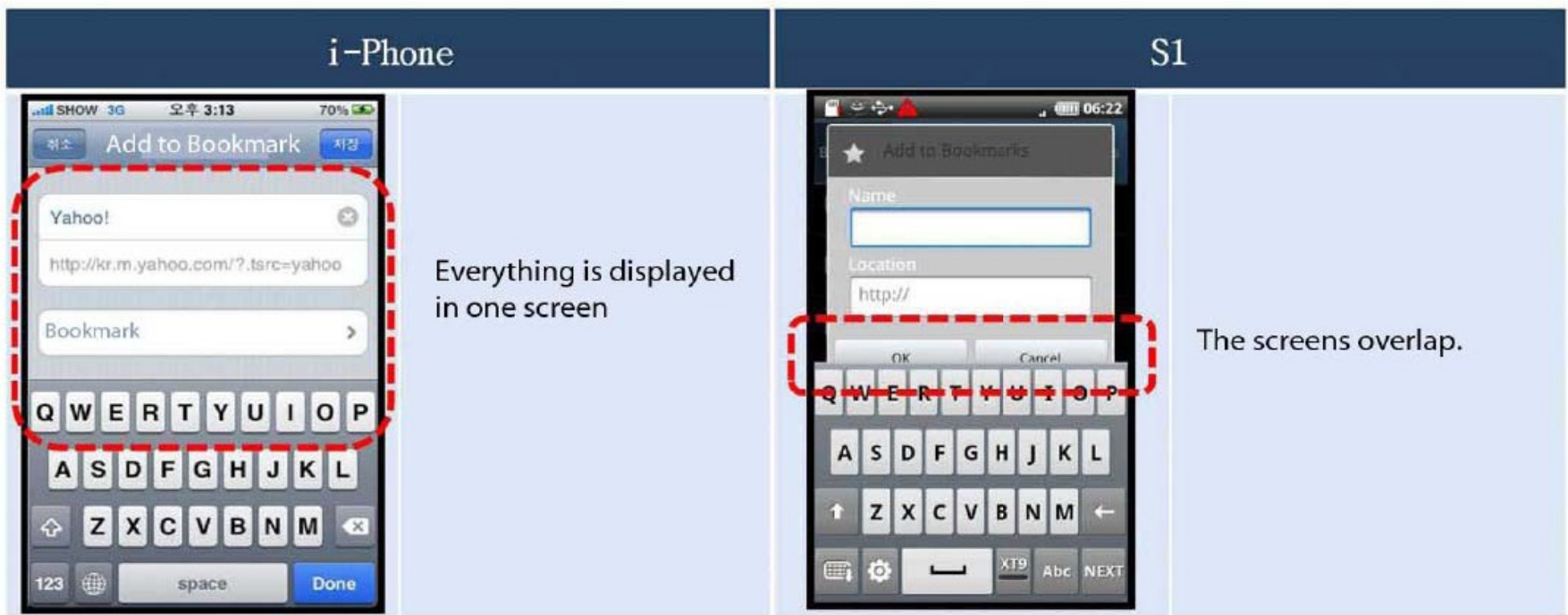
Directions for Improvement

Need to modify so that duplicate menu icons cannot be placed on the home screen

6. Browsing _ Web Browser

☐ “Add to Bookmark” input screen and the keypad screen overlap.

- i-Phone: All implemented in one screen.
- S1: The input screen and the keypad overlap.

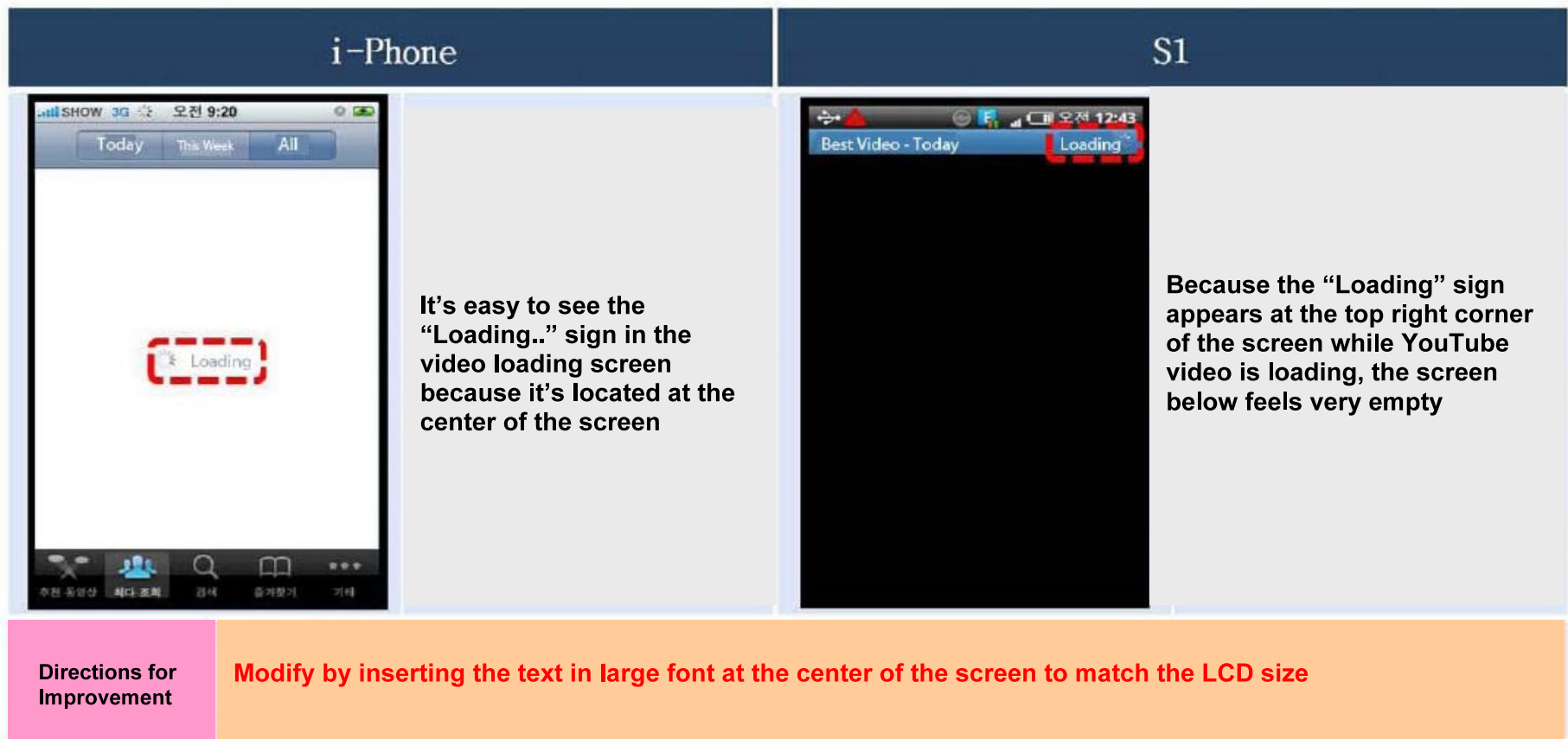


Directions for Improvement

The screens should not overlap.

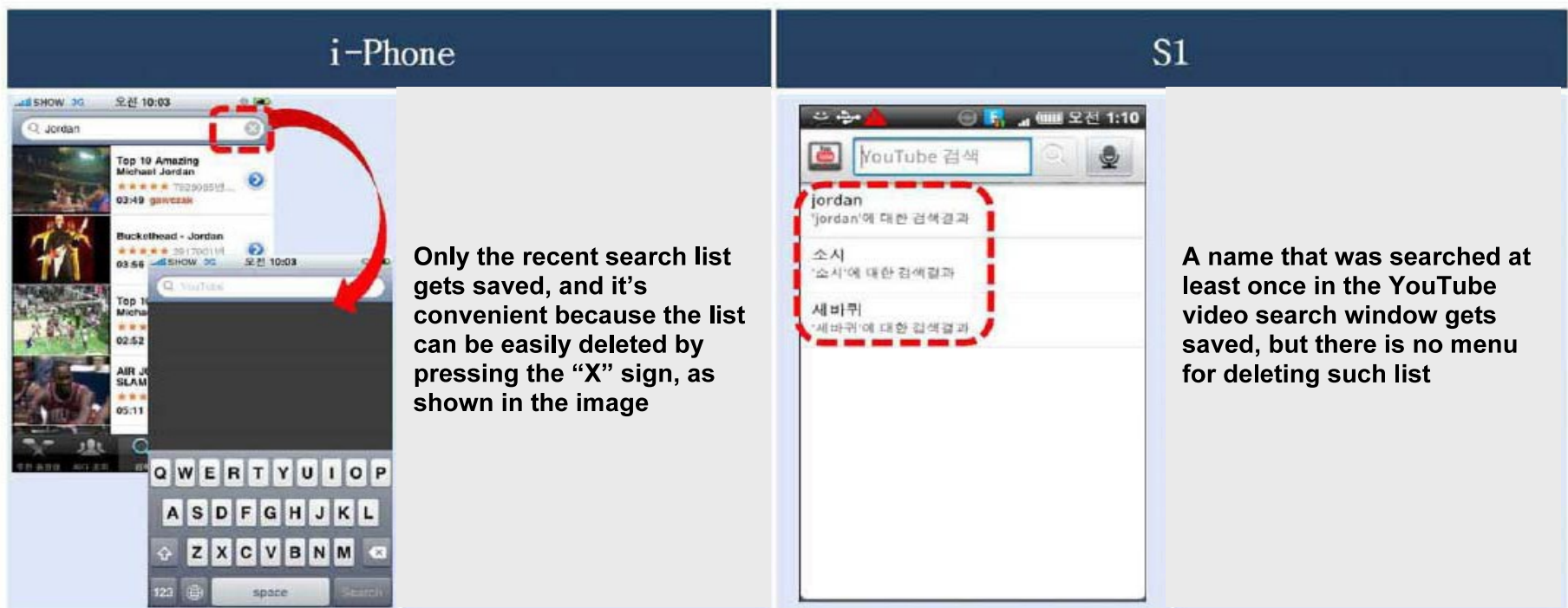
7. Browsing _ Web Browser

- While loading Youtube videos, the entire screen feels empty because the “loading” sign is at the top right corner
 - i-Phone: “Loading” sign appears at the center of the screen while video is loading
 - S1: “Loading” sign appears at the top right corner of the screen while YouTube video is loading



8. Browsing _ Web Browser

- ❑ **There is no menu to delete recent Youtube search history**
 - i-Phone: Only one recent search list gets saved
 - S1: Many recent Youtube search lists get saved, but they cannot be deleted.



Directions for Improvement

Need to remove unnecessary functions in site search and video list screens

9. Browsing _ Web Browser

☐ There are unnecessary menu icons when connecting to Youtube

- iPhone: When you check after connecting to Youtube, there are no Camera and Voice Memo icons
- S1: Menu icons that do not need to be used exist on the initial connection page and the search screen





Directions for Improvement

Need to remove unnecessary functions in site search and video list screens

10. Browsing _ Web Browser

❑ Other countries cannot be added in the Weather app



- i-Phone: Users can easily add other countries using the option key on the screen
- S1: There is no menu for selecting additional countries for checking the weather

i-Phone	S1
 <p>Cities can be easily added using the "I" key at the bottom right corner of the city screen for the country that you wish to check the weather for</p>	 <p>There is no menu to add cities other than the one you had initially configured to check the weather for</p>
<p>Directions for Improvement</p>	<p>Need to add a menu for conveniently adding more cities on the screen</p>

11. Browsing _ Web Browser

❑ Difficult to figure out the meaning of the word NEXT on the keypad.

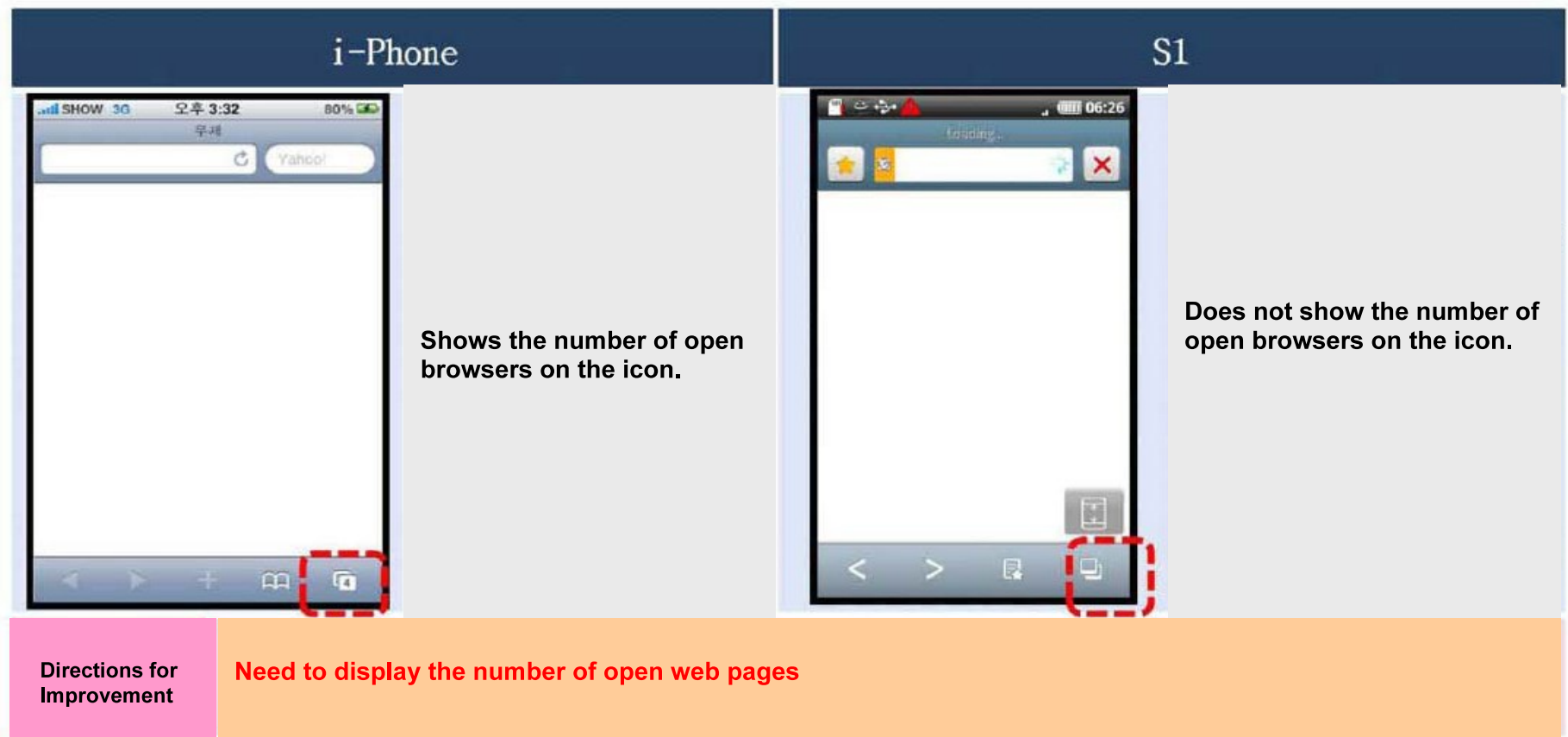
- i-Phone: The language changes when the icon is pressed..
- S1: It is hard to convey the meaning of NEXT.

i-Phone	S1
 <p>Pressing ↑ on the keypad changes the font to lower case.</p>	 <p>Pressing NEXT changes the font to lower case.</p>
<p>Directions for Improvement</p>	<p>Change to text corresponding to lower case ("abc") requested.</p>

12. Browsing _ Web Browser


Number of Browsers is not displayed.

- i-Phone: Displays the number of browsers when multiple browsers are open.
- S1: Can't figure out how many browsers are open..





13. Browsing _ Web Browser

- ❑ **There is no function of Copying/Cutting the desired word on a page by long pressing**
 - **i-Phone: It gets dragged by a long Tap and can be immediately copied**
 - **S1: Does not support the function**

i-Phone	Lismore	
	<p>It immediately switches to a status where you can Copy if you long press the area you wish to copy and then remove your fingers</p>	<p>Does not support the function</p>
<p>Directions for Improvement</p>	<p>Copy function should be added to enable convenient copying of desired words</p>	

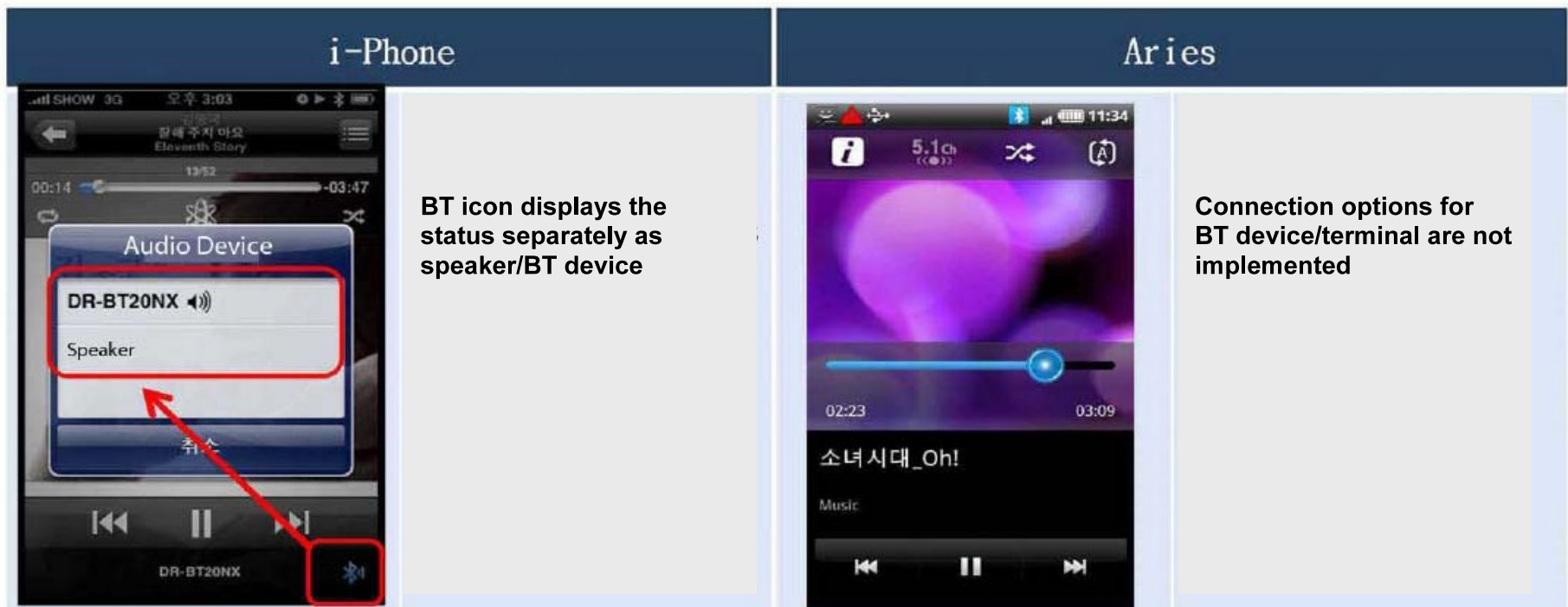
14. Browsing _ Application

- ❑ **Related application list can't be previewed when the initial character is entered in a market search**
 - iPhone: During an App search, related app list shows up even when just the initial character is typed in
 - S1: During an App search in Market, no list appears even when the initial character is typed in

i-Phone	S1
 <p>All related lists appear when just the initial letter is typed into the search window</p>	 <p>During an app search, no relevant app list appears when the initial letter is typed in. The list only appears after the desired word is typed in and the search button is pressed</p>
<p>Directions for Improvement</p>	<p>Need to improve so that relevant application list appears even when just the initial character is typed into the search screen</p>

15. Connectivity _ Bluetooth

- ❑ BT headset MODE conversion feature is not implemented.
- iPhone: BT device/terminal status is easily recognizable.
- S1: BT device/terminal conversion option is not implemented during music play





<p>Directions for Improvement</p>	<p>Need to implement a UI that shows the output status as BT device/terminal.</p>
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16. Connectivity _ Wi-Fi

☐ Wi-Fi connection does not get established in one screen


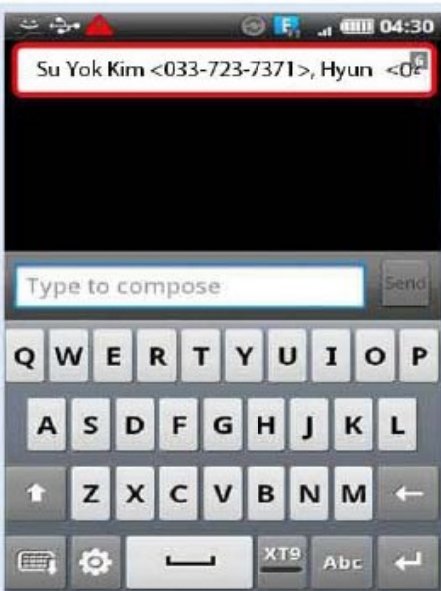
- i-Phone: Displays the Network list in one screen when the Wi-Fi is turned on.
- S1: Depth gets longer as the Wi-Fi On/Off function and the Setting screen are composed separately

i-Phone	Aries
 <p data-bbox="659 762 1052 1026">Menu is intuitive because the slide key characteristics of the i-Phone are applied uniformly, and it is convenient to use because the searched AP list immediately appears below when Wi-Fi is turned on</p>	 <p data-bbox="1549 762 1934 925">As On/Off screen and the Setting screen are composed separately, user has to go through more steps to connect to Wi-Fi.</p>
<p>Directions for Improvement</p>	<p>Need to modify so that the number of steps required to connect to Wi-Fi network does not become large</p>

17. Messaging _ SMS



☐ When same SMS is sent to multiple recipients, hard to recognize the total number of recipients because of small display

- i-Phone: When there are many recipients, the total number of recipients is displayed as "... & 5 others."
- S1: The total number of recipients is displayed at the top right corner in a very small size, such as 6

i-Phone	I9000(S1)
 <p data-bbox="659 833 1024 925">Indicates the total number of recipients as "... & 5 others."</p>	 <p data-bbox="1566 833 1932 925">Total number of recipients is indicated like 6, so is hard to recognize.</p>
<p data-bbox="222 1295 386 1349">Directions for Improvement</p>	<p data-bbox="445 1295 1503 1325">Need to make it distinguishable by using another symbol or a different color</p>

18. Messaging _ SMS

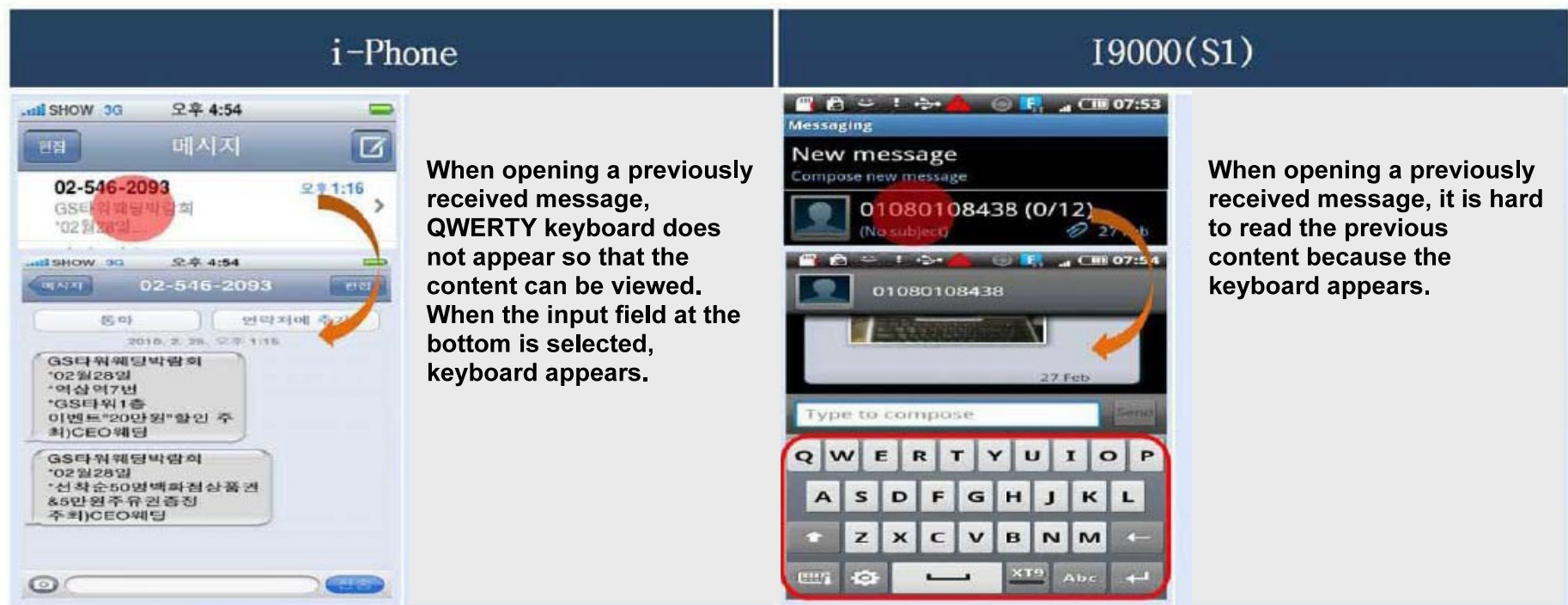
- ❑ Takes 5 steps to enter the New Contacts window when saving a number from SMS inbox
 - i-Phone: Takes a 3-step move to enter the New Contacts screen.
 - S1: Takes a 5-step move to enter the New Contacts screen.

i-Phone	I9000(S1)
 <p data-bbox="661 865 1029 1033">Need 3 steps to enter the New Contacts screen in order to save in the phone book the SMS number received</p>	 <p data-bbox="1543 865 1911 1033">Need 5 steps to enter the New Contacts screen in order to save in the phone book the SMS number received</p>
<p>Directions for Improvement</p>	<p>Improvement needed with regard to the number of steps required to save phone numbers from SMS inbox (The third picture in the above image of I9000 is unnecessary)</p>

19. Messaging _ SMS

☐ When entering Messaging menu and opening a previously received message, Qwerty keyboard shows up automatically

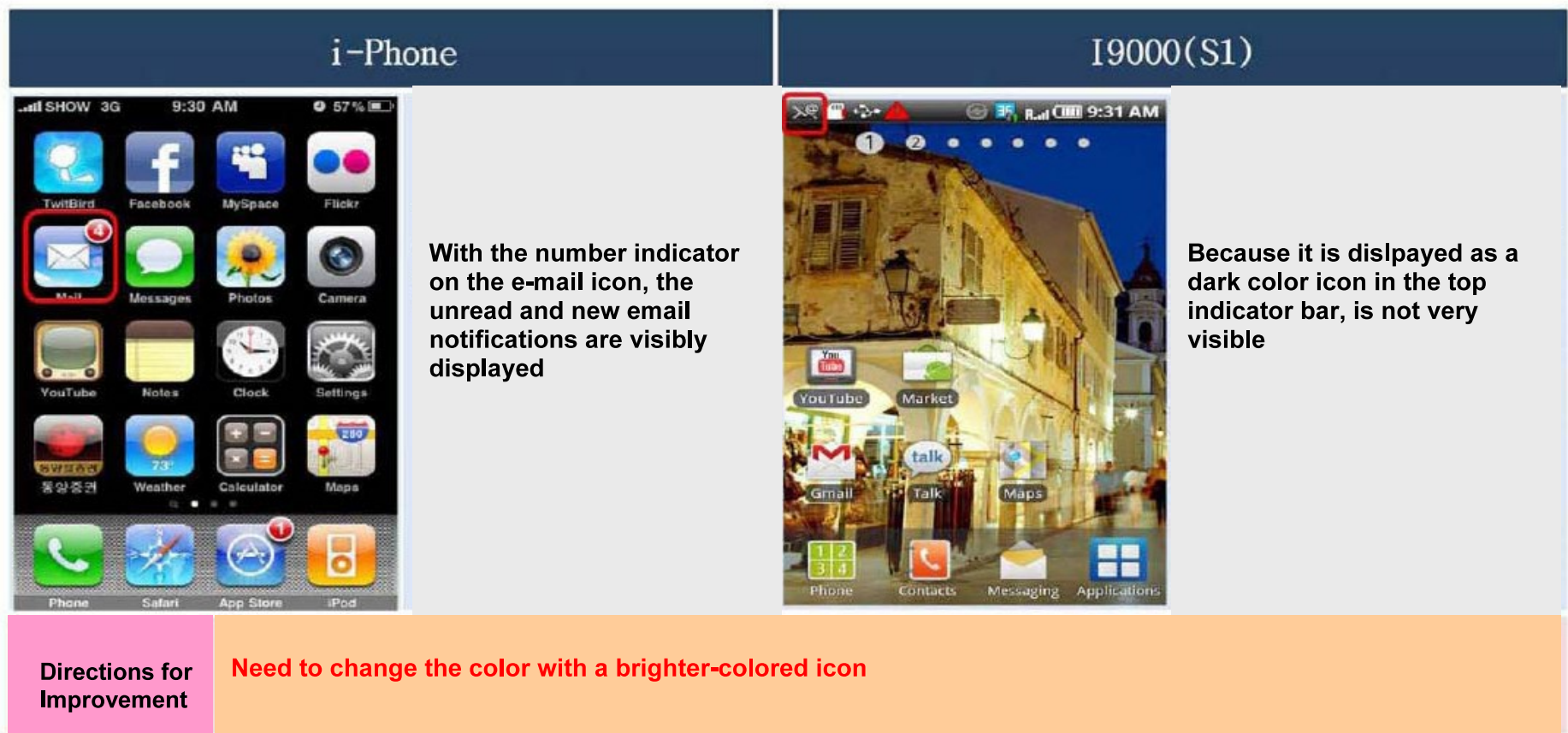
- i-Phone: When opening a previously received message, Show Content screen appears
- S1: It is hard to read existing messages because the Qwerty keyboard appears.



Directions for Improvement As the primary purpose of entering a previously received message is to view its contents, the keyboard should not appear. However, current format should be kept for accessing new messages.


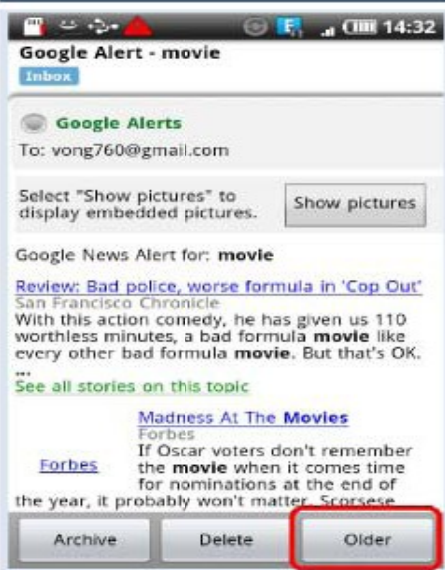
20. Messaging _ E-mail

- **As the e-mail receipt icon is black and overlaps with the background, it is hard to see**
 - i-Phone: Visibly indicated through a number display
 - S1: Hard to see as it overlaps with the color of the indicator




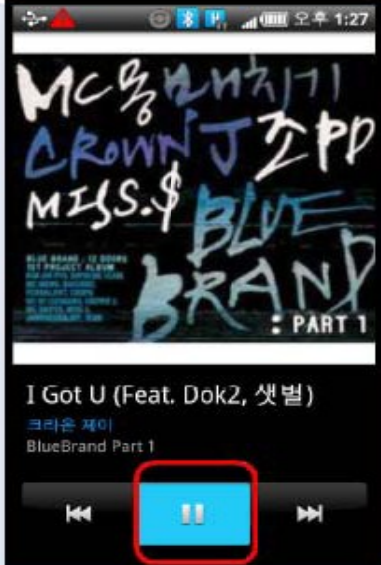
21. Messaging _ E-mail

- It is inconvenient to switch over to the next e-mail while reading an e-mail
 - iPhone: With the Previous and Next buttons, it is easy to navigate between e-mail messages
 - S1: There is a Previous button, but no Next button

i-Phone	I9000(S1)
 <p>While reading an e-mail, the previous or next message can be checked with one click with the Older, Next button</p>	 <p>As only the Older button is provided, there is an inconvenience of having to go to the inbox first using the back key, and then selecting the next message again</p>
<p>Directions for Improvement</p>	<p>Should provide the Next button for checking the newer emails</p>


22. Multimedia _ Music Player

- Because the screen transition speed is fast when Media play key is pressed, it doesn't feel luxurious
 - iPhone: As the transition speed of the white-smearing effect is slow when the key is Tapped, it feels luxurious
 - S1: Only the color changes to blue

i-Phone	S1
 <p data-bbox="646 846 1016 1043">When a key is tapped, displays a slowly spreading and disappearing effect, giving a feel of leisure and luxuriousness</p>	 <p data-bbox="1478 846 1856 875">It simply changes the color</p>
<p data-bbox="201 1273 365 1328">Directions for Improvement</p>	<p data-bbox="422 1273 1661 1302">Give a luxurious feel by providing a slow transition effect when icon click status changes</p>

23. Multimedia _MMS


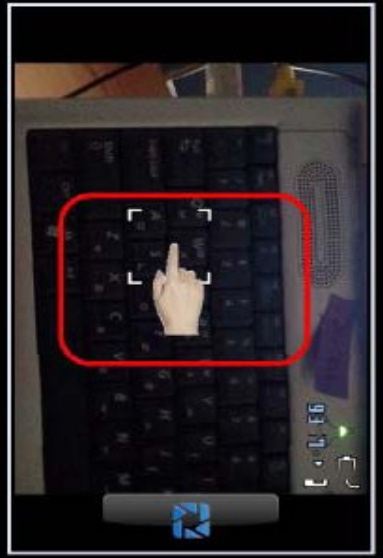
- ❑ **There is no Edit function when attaching a large video file**
 - **i-Phone:** When attaching a large video file, possible to select desired parts for attachment
 - **S1:** When the file is large, can attach only the maximum capacity calculated from the beginning

i-Phone	S1
 <p data-bbox="640 841 995 1034">If the file size is large, the clip on top of the screen can be selected for the user to select the desired parts and size (upto the maximum size) to attach</p>	<p data-bbox="1520 841 1885 1034">When the file size is large, delivery failure pop up appears and is configured to allow attaching upto the size limit from the beginning.</p>
<p data-bbox="201 1273 363 1323">Directions for Improvement</p>	<p data-bbox="426 1273 1770 1298">Improvement required so that the desired portions can be attached within the maximum capacity.</p>

24. Multimedia_Camera

❑ The visual effect for the preview focus point is weak

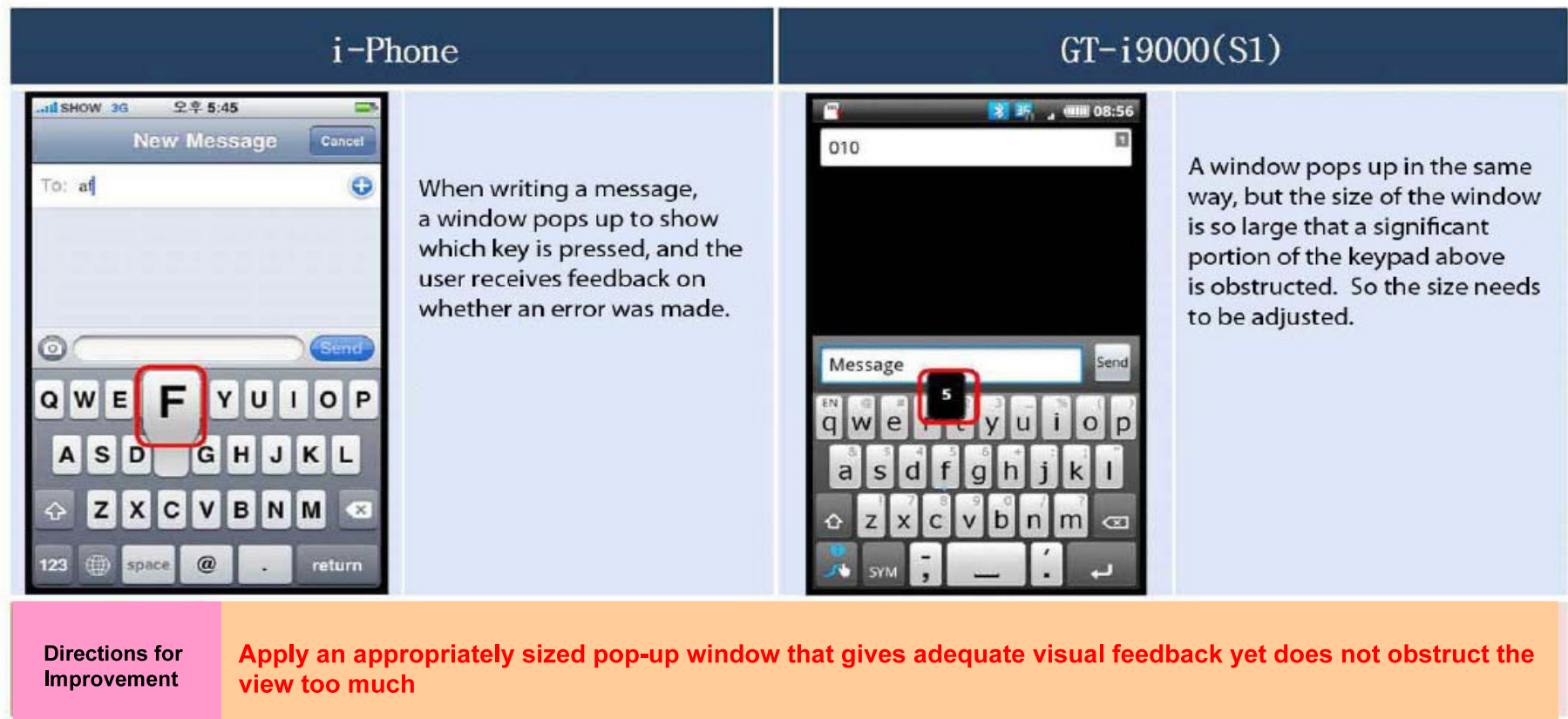
- iPhone: There is a visual effect of the focus point converging from the outside to the inside.
- S1: Only the focus point moves to the touched location.

i-Phone	S1
 <p data-bbox="636 853 1003 979">The visual effect in which the focus point converges into the tapped location from outside is maximized</p>	 <p data-bbox="1524 853 1885 912">Only the pointer moves to the tapped spot</p>
<p data-bbox="201 1273 363 1328">Directions for Improvement</p>	<p data-bbox="426 1273 926 1303">Need a visual effect during focusing</p>

25. Visual Interaction Effect _ Message


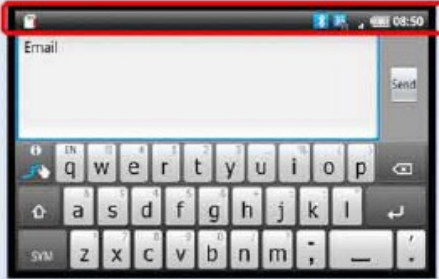
□ Pop-up blocks the view when the keypad is pressed while composing messages

- i-Phone: Pop-up window is a size of suitable visibility, appropriate for the keypad size.
- S1: The size of the pop-up is too large and obstructs the upper part of the keypad



26. Visual Interaction Effect _ Message

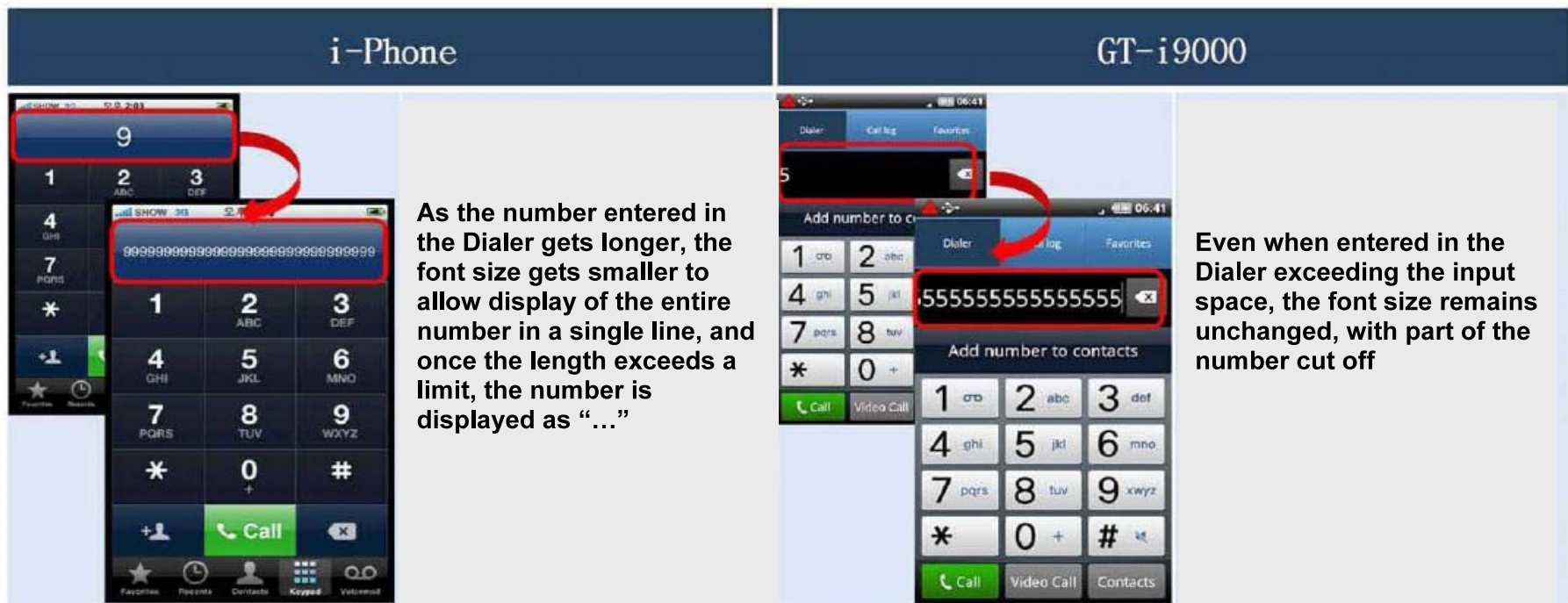
- ❑ **When composing a message in landscape mode, impossible to know the current menu**
 - **i-Phone:** Even if composing in landscape mode, the status bar at the top shows what the current menu is
 - **S1:** When composing in landscape mode, the input window changes to full screen, making the current menu is unknown

i-Phone	GT-i9000(S1)
 <p data-bbox="648 858 999 987">Even when entering in landscape mode, the status bar on top shows what the current menu is</p>	 <p data-bbox="1530 791 1923 987">When entering in landscape mode, the input window converts to full screen, making it difficult to know which text box is being used</p>
<p data-bbox="199 1270 363 1328">Directions for Improvement</p> <p data-bbox="422 1270 1917 1328">When a message is being entered, the status bar at the top indicates which menu is currently being used by the user</p>	

27. Visual Interaction Effect _ Dialer Input

When a long list of numbers is entered into the Dialer, difficult to recognize in one glance

- i-Phone: If the number gets long in the dialer, the font size shrinks to fit the number in one line
- S1: When entered beyond the input space, the exceeded part of the number is either cut off or does not appear



As the number entered in the Dialer gets longer, the font size gets smaller to allow display of the entire number in a single line, and once the length exceeds a limit, the number is displayed as "..."

Even when entered in the Dialer exceeding the input space, the font size remains unchanged, with part of the number cut off

Directions for Improvement **Should be divided into sections so that user can recognize at a glance, or use “,” consistently per every few numbers so that it is easy for users to view the long list of numbers entered at a glance**

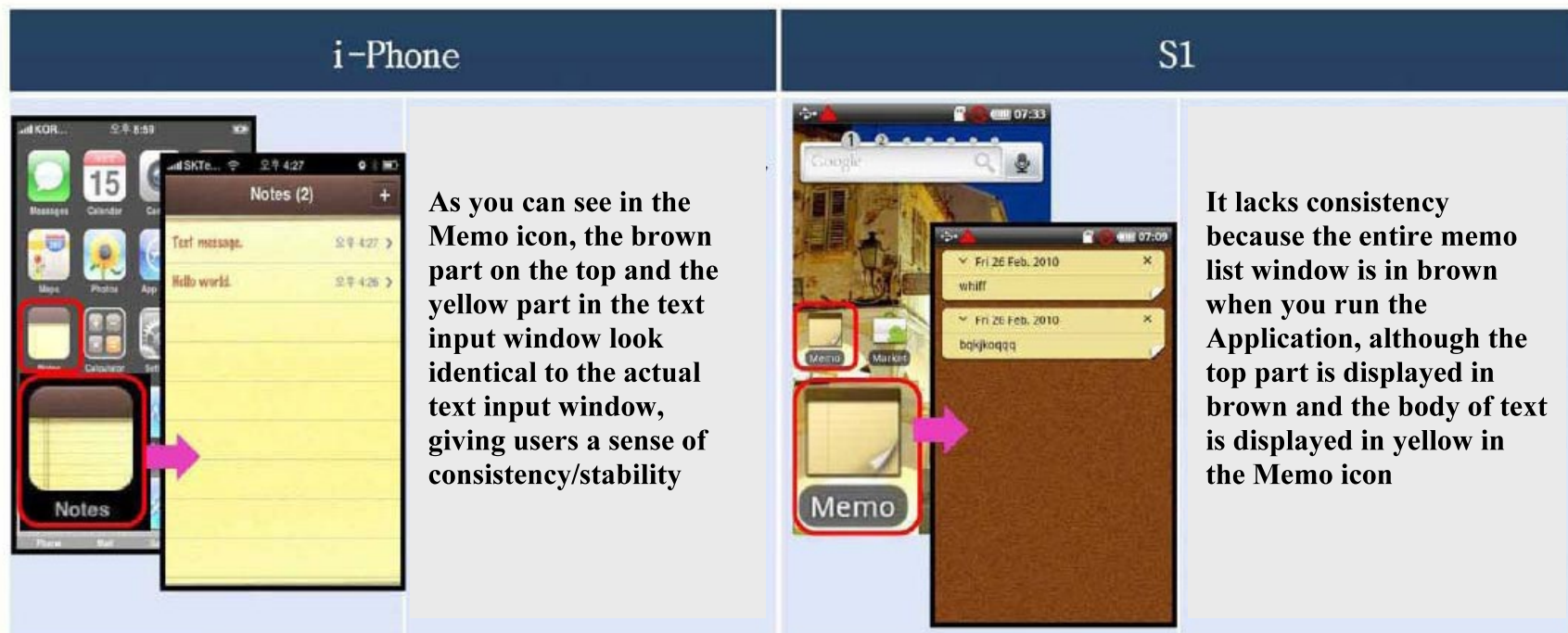
Translation

III. Usability Issues Overlapping with Lismore's

28. Basic Function _ Memo

□ UI consistency suffers because the Displays for the Memo icon and the application window are different

- i-Phone: The memo input window that looks identical to the Memo icon on the Home Screen gets Displayed
- S1: The input window with a completely different makeup is Displayed when running the Memo Application



As you can see in the Memo icon, the brown part on the top and the yellow part in the text input window look identical to the actual text input window, giving users a sense of consistency/stability

It lacks consistency because the entire memo list window is in brown when you run the Application, although the top part is displayed in brown and the body of text is displayed in yellow in the Memo icon

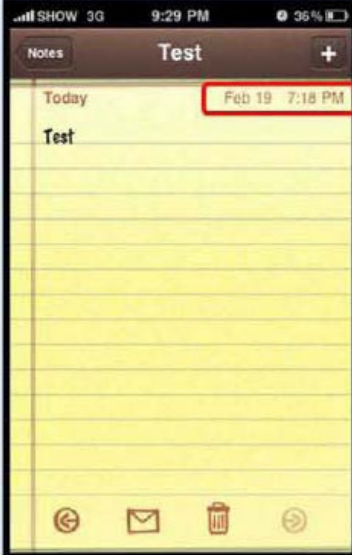

Directions for Improvement

Modification should be made so that the Displays for the Memo icon and its application window look identical

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29. Basic Function _ Memo

- **It is inconvenient because the memo function only provides date/day of the week information without the information on what time it was created**
 - **i-Phone:** It is more convenient to use because time information for when the memo was created gets displayed on the top right of the memo writing window
 - **S1:** Users cannot find out when the memo was created because it only provides the date of creation for the memo

i-Phone	S1
	<p>Date of creation/time are displayed together at the top right, so the users can have information on the accurate memo creation date and time, and the convenience of use is enhanced</p>
	<p>User can't find out when the memo was created because only date/day of the week information is provided without the time on the memo List. Lacks convenience of use</p>
<p>Directions for Improvement Need to improve the convenience of use by displaying the time when the memo was created</p>	

30. Basic Function _ Memo

- ❑ **Decreased usability and convenience of use due to the lack of information on the number of saved memos and a Search function**
 - **iPhone:** By loading information on the total number of memos and a Search function, convenience of use is improved
 - **S1:** It is inconvenient because the user has to individually Count and search memos

i-Phone	S1
 <p>The number of memos is displayed at the top center of the screen, increasing convenience of use</p> <p>There is a Search bar above the Memo List, allowing a user with many saved memos to quickly Search the memos</p>	 <p>Because there is no information on the total number of saved memos, the user must individually count memos by Scrolling</p> <p>Because there is no Search function, the user is inconvenienced with having to find each needed memo individually himself/herself</p>

Directions for Improvement

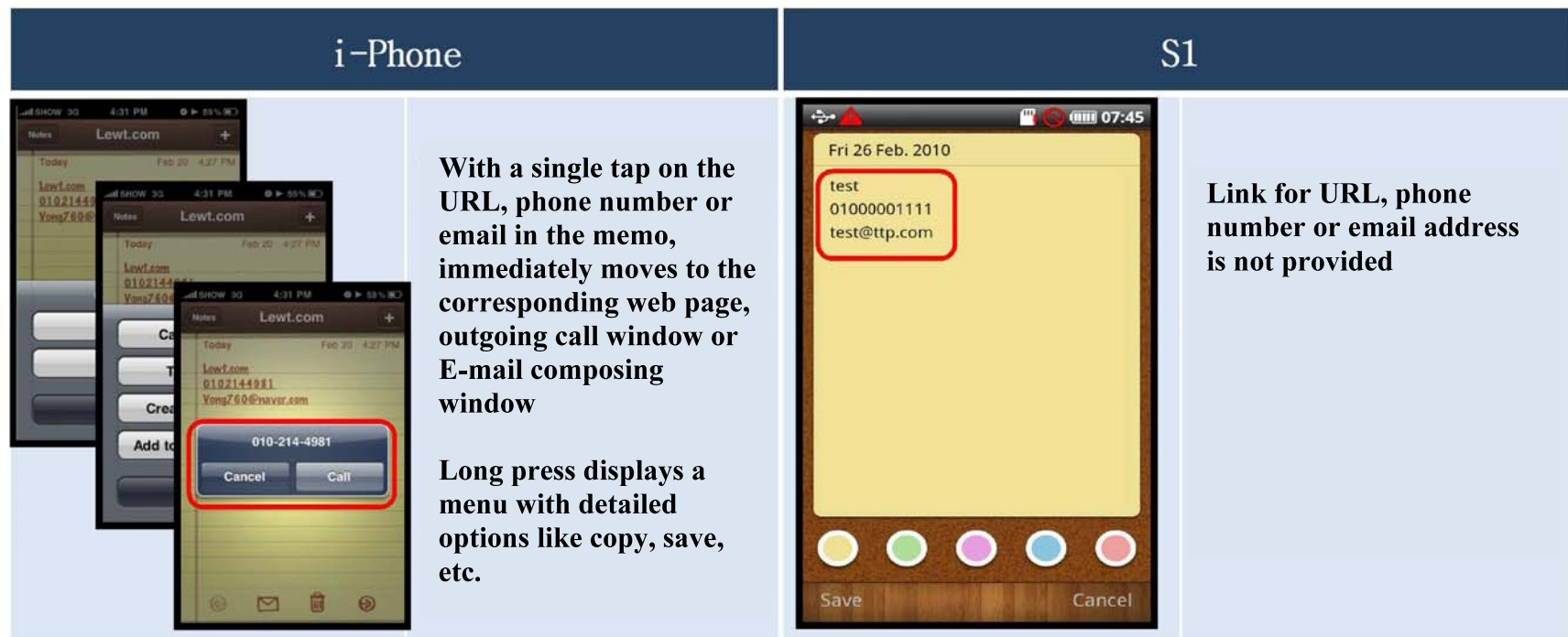
Need to improve convenience of use by providing displays for the number of memos and a Search function

Translation

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31. Basic Function _ Memo

- ❑ **When a memo contains URL, phone number or Email, no Link is provided.**
 - **i-Phone: A link for the URL, phone number or email address in the memo is provided through Tap or long press.**
 - **S1: No link function is provided at all.**



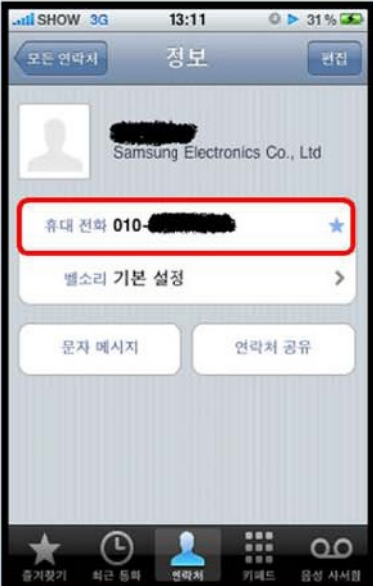

Directions for Improvement **Need to improve usability by providing Links for memo contents such as Web, Call and E-mail, that can be linked.**

Translation

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32. Basic Function _ Contact



- ❑ It is inconvenient because a UI that allows immediate Voice call when selecting a Contact is not implemented
 - i-Phone: It is implemented so that it can go directly from Contact information to Voice Call
 - S1: Can only call if the user selects Voice Call in the pop-up that appears after selecting the number

i-Phone	S1
 <p>When a number saved in the phonebook is selected, it directly connects to Voice Call, improving convenience of use</p>	 <p>When a saved number is selected, a pop-up asking to select from Voice Call, VT Call, or MSG appears and the user must make a selection</p> <p>In the case of the domestic version of Archer, the Call icon and the MSG icon are located to the right of Contact so the user can directly make a Voice Call</p>
<p>Directions for Improvement Like the domestic version of the Archer, need to implement a UI that places the Call icon and the MSG icon to the right of the Contacts list, allowing the user to connect directly to Voice Call</p>	

33. Basic Function _ Contact

❑ The accessibility of the alphabetical search function in the Contact List screen is lacking

- i-Phone: The alphabetical search BAR is displayed on the right side of the screen so the user can use it intuitively
- S1: The alphabetical search BAR is only displayed when the right side of the screen is touched, so accessibility for the function is low

i-Phone	S1
 <p>The alphabetical search BAR is always displayed on the right hand side of the screen so the user can use it intuitively</p> <p>The alphabetical search Bar supports both the Korean and the English alphabet so it is even more convenient to use</p>	 <p>The search BAR is not visible and you can only search when Long pressing, so user accessibility for the function is poor</p>
<p>Directions for Improvement</p>	<p>The search BAR should always be displayed so the user can immediately recognize/use it</p>

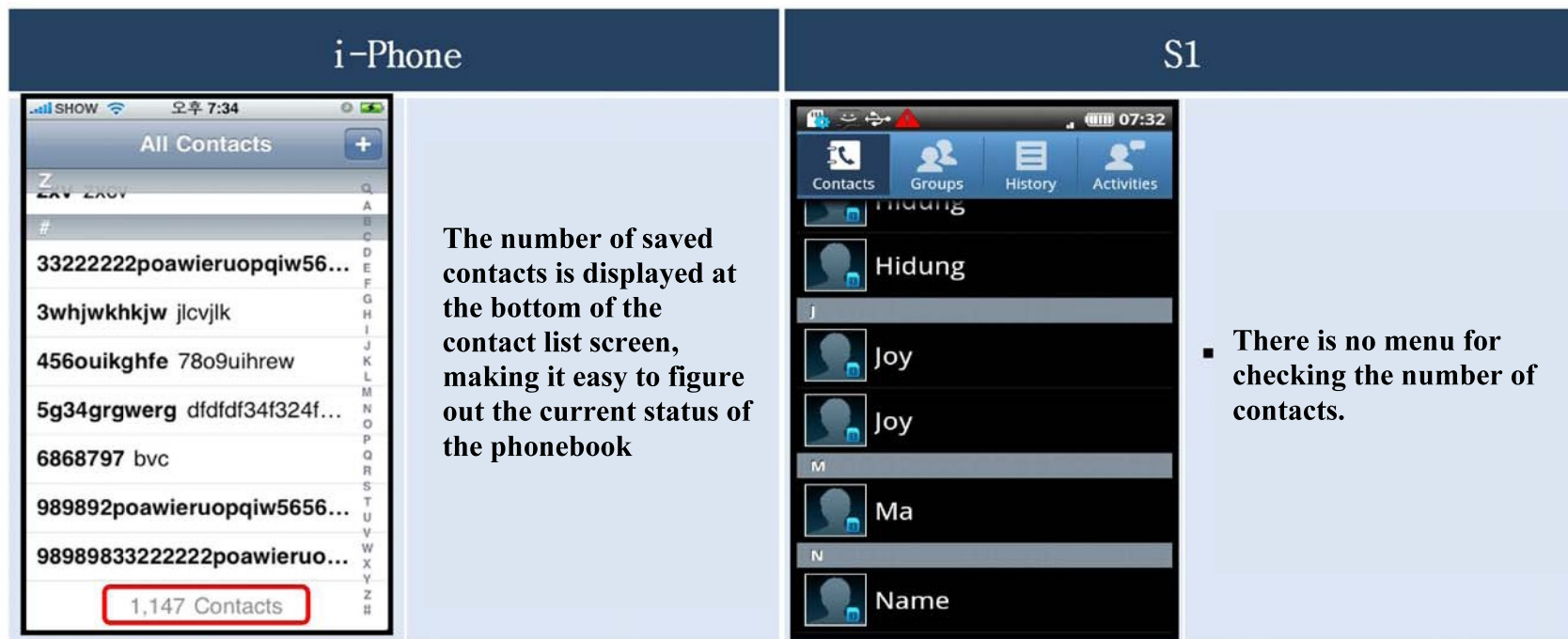
Translation

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34. Basic Function _ Contacts

❑ The number of saved Contacts is not displayed on the Contact list screen

- i-Phone: Can immediately find out the number of saved contacts on the Contact list screen
- S1: There is no way to check the number of contacts saved on the phone.



Directions for Improvement **Need to modify so that it is possible to figure out the number of saved Contacts on the Contact list screen**


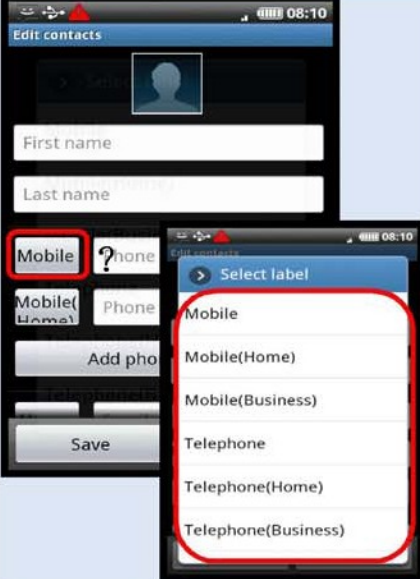
Translation

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35. Basic Function _ Contacts

❑ There is no indicator for detailed view in the menu to switch phonebook type

- **i-Phone:** Provides an indicator (>) for the sub-menu
- **S1:** Not as intuitive because there is no indication of the menu's existence



i-Phone	S1
 <p>Gives guidance in regards to the lower-depth menu and also displays the full list when entering the menu</p>	 <p>Even when a lower-depth menu exists, there is no reference to it at all. Even when entering the menu, despite having the space to display in full screen, it is displayed with a scroll pop-up</p>
<p>Directions for Improvement</p>	<p>Need to provide indications to facilitate sub-menu access</p>

Translation

Confidential

36. Basic Function _ Alarm

- ❑ The alarm screen layout is not user-friendly compared to the i-phone and the graphics are dull
 - i-Phone: The feature for setting the time consists of a Dial so it is convenient for the user to use
 - S1: The time setting UI is inconvenient, and the UI for manually inputting the time lacks intuitiveness



i-Phone	S1
 <p>The time setting feature is in Dial format, so it is easy for the user to set</p> <p>Since information related to alarm Options is at the top of the screen while the time-setting portion is visible at the bottom of the screen, the alarm can be set all at once</p>	 <p>The time setting method is pressing the +, - buttons, which is more cumbersome than the Dial method</p> <p>Keypad is displayed when the number part is selected, but because the button part overlaps with the time setting pop-up, incorrect recognition and non-recognition occur</p>
<p>Directions for Improvement</p> <p>Input method has to be improved because the time setting method is inconvenient compared to i-phone. Modification should be made so that an alarm pop-up and keypad don't overlap.</p>	

Translation

Confidential

37. Basic Function _ Calculator

- ☐ It is difficult to figure out the number of digits because there are no markers for every increment of one thousandth
 - i-Phone: Every increment of a thousand (3 digits) units is marked, making it easy to distinguish units when inputting numbers
 - S1: It is inconvenient because there is no marker and the user has to count each individual digit

i-Phone	S1
	
<p>For every 3 spaces “, (marker for increments of thousand)” there is a marker making it easy to recognize the number of digits of the number that is typed in</p> <p>Visibility is good because the numbers are spread apart wide from each other horizontally</p>	<p>Because there is no unit marker, it is difficult to recognize the number of digits of the number that is typed in</p> <p>It feels crowded because the left and right gaps between numbers are narrow.</p>
<p>Improvement Directions</p>	<p>Need improvement so that it's easy to distinguish when inputting numbers by displaying unit markers Need to ensure visibility by placing the numbers further apart from each other horizontally</p>

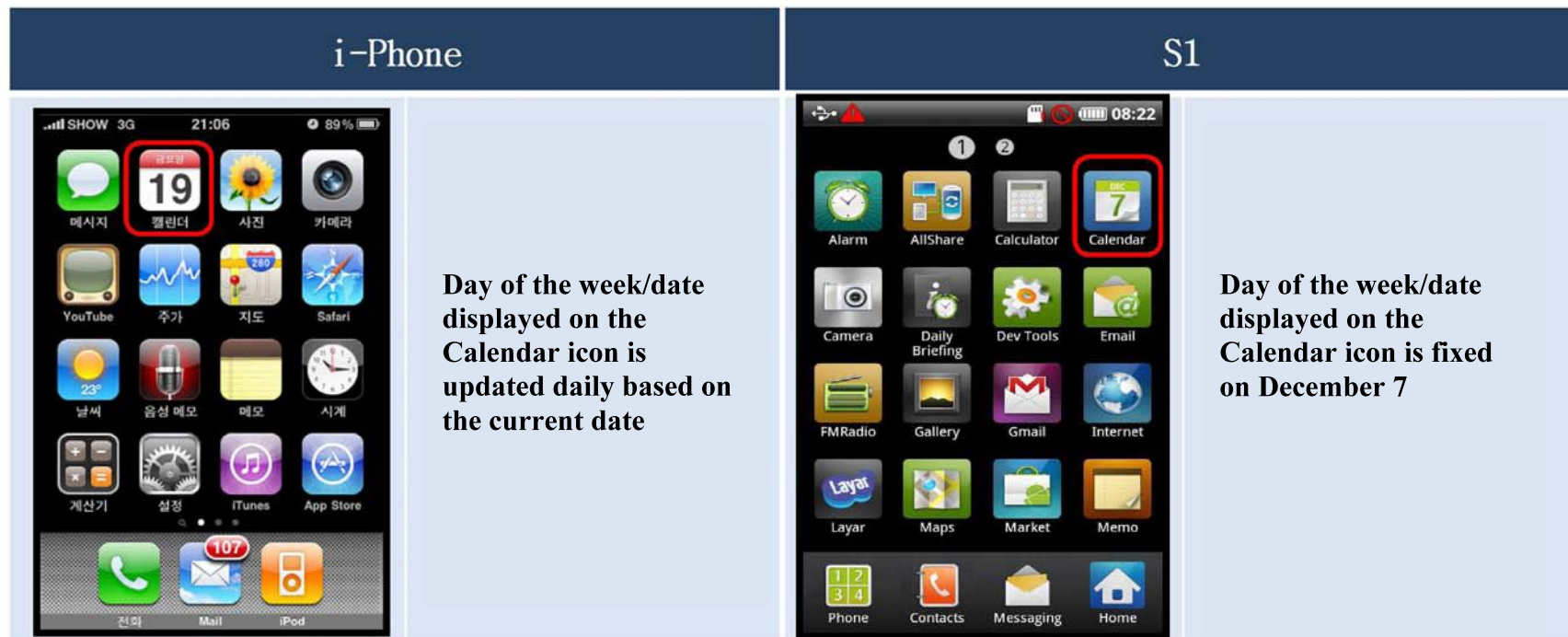
Translation

Confidential

38. Basic Function _ Calendar

❑ The date on the Calendar Icon doesn't change, causing confusion for the users

- **i-Phone:** Day of the week/date on the Calendar icon is updated daily based on the current date
- **S1:** The date is fixed on December 7 because it is a Graphic icon



Directions for Improvement

The date displayed on the Calendar icon should match the current date on the phone

Translation



Confidential

39. Basic Function _ Event

❑ Insufficient Time information in the Event Start/End Screen

- i-Phone : All necessary information such as date/day/time, etc. on the Event Start/End screen
- Display



S1 : Only displays date/time and today (Today) is displayed only in number format

i-Phone	S1
 <p>Provides users with date/time/day of the week information</p> <p>Minimizes user confusion by displaying today's date as set on the phone as 'Today'</p> <p>Easy to use because Dial method is used for time setting</p>	 <p>Only provides users with time/date information</p> <p>Today's date as set on the phone is displayed only in number format as well</p> <p>Easy to use because time setting method is implemented</p>

Directions for Improvement : Need to implement in a way that today (Today) can be displayed with Display for day of the week added
 For time setting method, need to implement the Dial method which would allow users to set it more conveniently

40. Basic Function _ Call

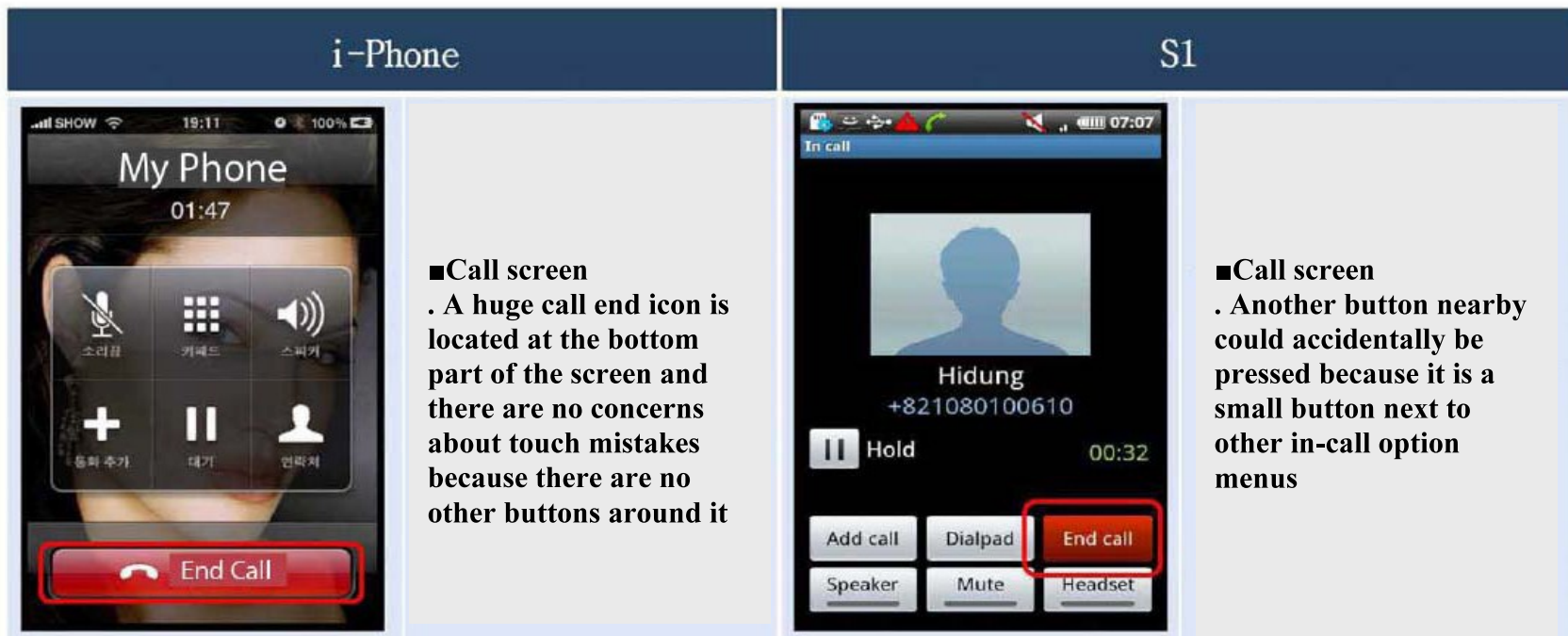
- There are concerns of user confusion and malfunction because the indicator showing your in-call status is unclear.
 - iPhone: Offers a function that allows you to immediately return to call after using additional features during the call with instructions
 - S1: User cannot intuitively understand how to return to call mode

i-Phone	S1
 <p>It is easy to recognize that you are in the middle of a call no matter which appl. you are running and when you are moving to a different screen to use another function during a call, and you can return to call screen with just one touch</p>	 <p>It is difficult to recognize that you are in the middle of a call because the in-call status only gets displayed as an icon on the top of the screen during the call</p> <p>The process to return to call mode is complicated and lacks accessibility</p> <p>You can return to call screen if you flick down the Indicator at the top and select Current Call</p>

Directions for Improvement Need to improve accessibility for the screen during a call and fix it so that the indicator showing the in-call status is more intuitive on the screen and can be recognized in one glance

41. Basic Function _ Call

- ❑ When ending Call during a call, there is a possibility of mistake because the end button is too small.
 - i-Phone: Supports a big, wide button at the bottom part of the screen.
 - S1: It's one of the 6 Call option buttons and the size is too small.



Directions for Improvement **Need to modify the call end button on the call screen so that it is a separate large button**

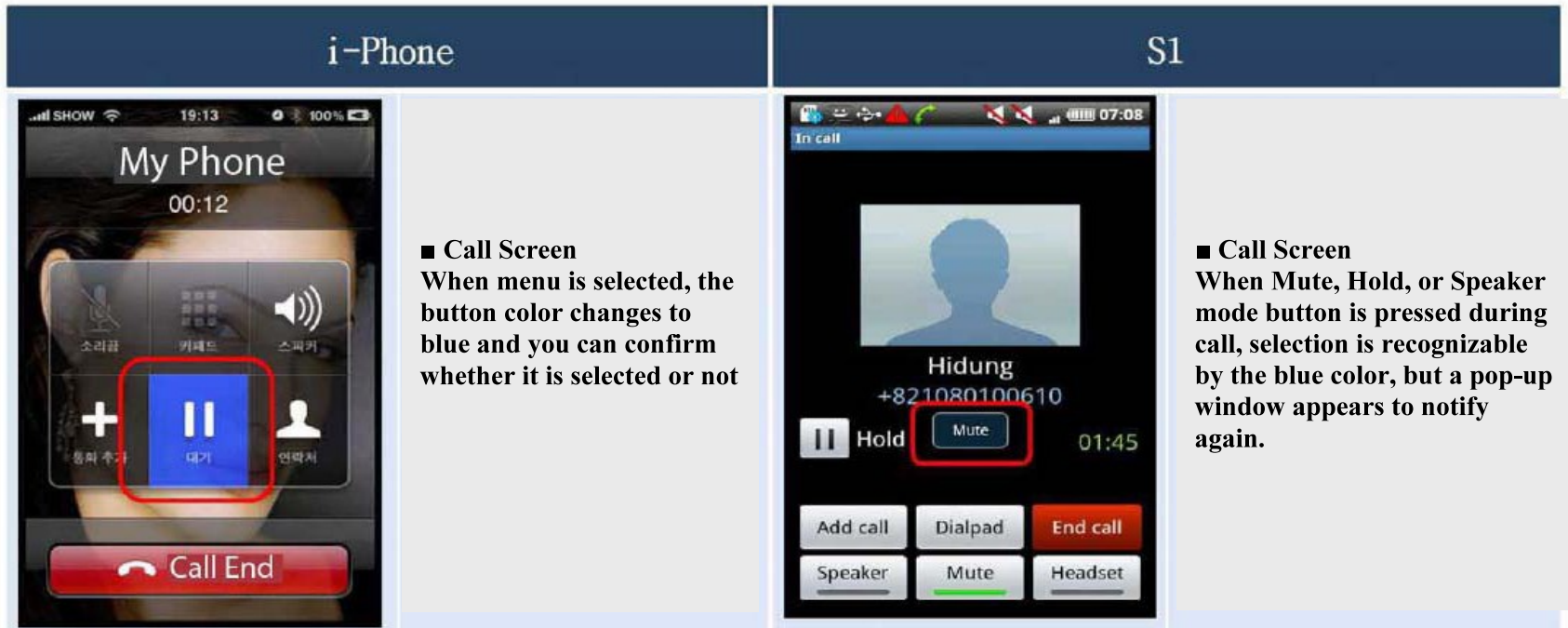
Translation

Confidential

42. Basic Function _ Call

❑ There are too many unnecessary Pop up windows during a call.

- i-Phone: Can recognize whether or not a button is selected by the change in color on the screen.
- S1: A pop-up window is repeatedly displayed even though the selection of a button can be recognized by the change in color.



Directions for Improvement **Need to delete unnecessary Pop up windows during call**

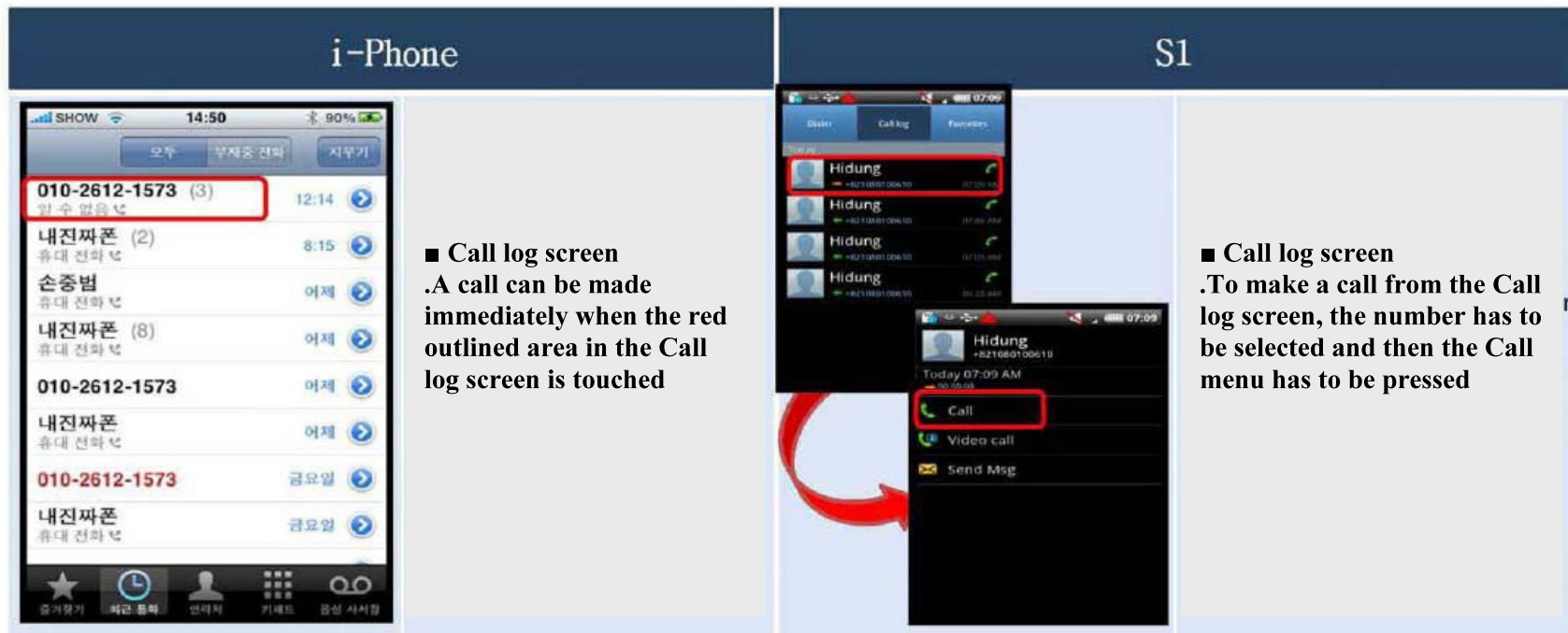
Translation

Confidential

43. Basic Function _ Call

❑ It's inconvenient to make a call from the Call log because you have to access 2nd Depth

- i-Phone: It is convenient because you can make a call by touching the number once from the Call log screen
- S1: You can only make a call after selecting the number on the Call log screen and then pressing the call key again on the number screen



Directions for Improvement **Need to add a function for making calls from the Call log screen with just one touch**



Translation

Confidential

44. Basic Function _ Call

❑ The makeup of the volume adjustment screen is too dull

- i-Phone: Applying the Progress bar and speaker animation at the center of the screen creates good visibility
- S1: Lacks balance because there is only the Progress bar compared to the entire screen



i-Phone	S1
 <p data-bbox="638 757 1003 950">Can immediately recognize the volume adjustment status and pictures are placed harmoniously in a balanced manner over the entire screen</p>	 <p data-bbox="1472 757 1854 987">It's very dull because the volume adjust screen only gets displayed with a single Progress bar, and it blocks the top window in the call screen because it's located far too high</p>
<p data-bbox="247 1295 407 1350">Directions for Improvement</p>	<p data-bbox="447 1261 1837 1367">Need to apply additional pictures or animations such as a speaker to fill out the empty space on the screen in a balanced manner and need to modify so that it doesn't obstruct part where the information is displayed on the call screen</p>

Translation

Confidential

45. Basic Function _ Battery

- ❑ **The remaining battery indication during use is insufficient**
 - i-Phone: Clear indication with Battery bar and numerical value display
 - S1: Only the Battery bar is displayed and does not provide precise information on the remaining battery life

i-Phone	S1
 <p>The remaining battery is displayed with the Battery bar and with a precise numerical value, % (percent)</p> <p>While the battery is being charged, the battery bar is indicated with a charging icon.</p>	 <p>Battery bar only is displayed, and while the battery is being charged, the shape of the battery bar is the same and displayed as a progress bar.</p>
<p>Improvement</p>	<p>Improvement by which the remaining battery life is shown as a numerical value when a long touch is applied to the battery icon is needed.</p>

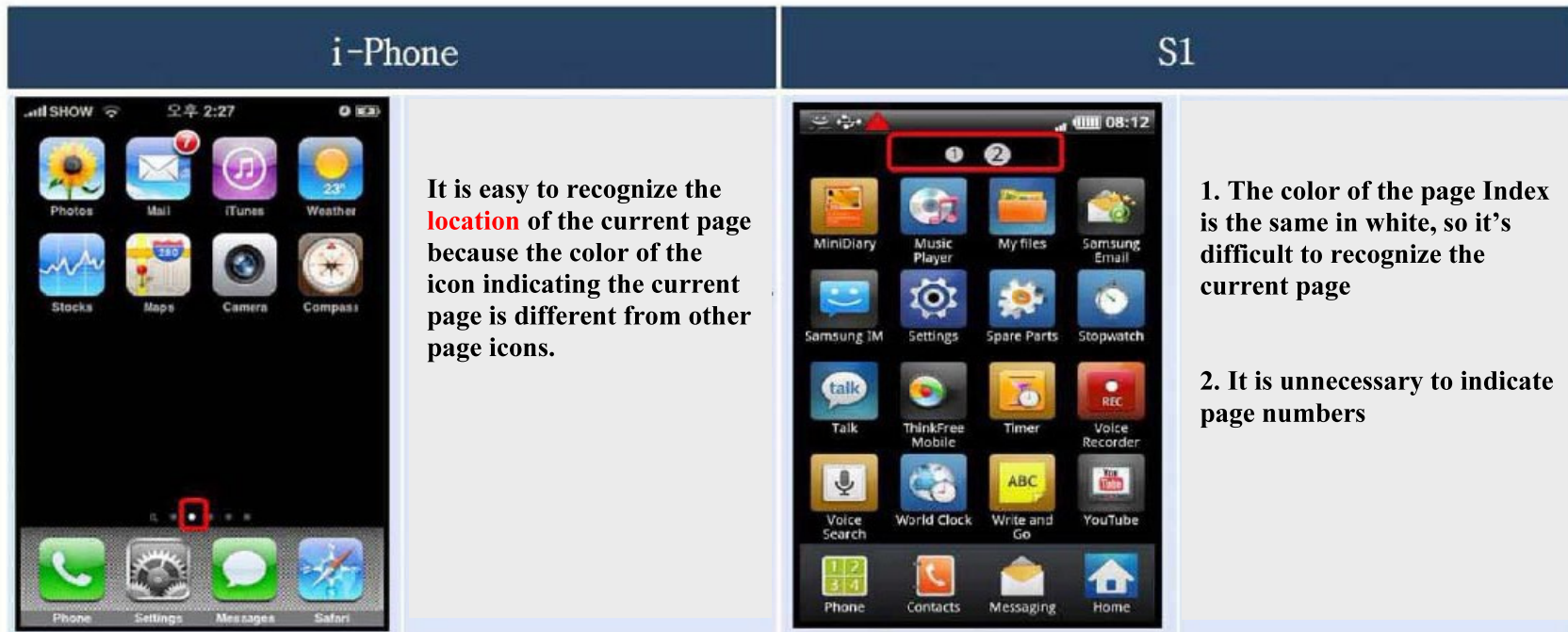
Translation

Confidential

46. Basic Function _ Home Menu

☐ **Ledgibility of the menu page Index icon is low.**

- **i-Phone:** It is easy to recognize the current page because the current page icon color is different
- **S1:** Ledgibility of the current page number is low because page index is in identical color





Directions for Improvement **Need to change the color of the Index icon so the current page in the menu is distinguishable and need to reconsider the concept of not displaying the page number**

Translation

Confidential

47. Basic Function _ Calendar

- **Visibility is low because the area displaying schedule in the monthly calendar screen is too small**
 - **i-Phone: It is easy to check daily schedule because the area displaying daily schedule is large**
 - **S1: Visibility is low because the area displaying daily schedule is small**

i-Phone	S1
 <p>Visibility is good when checking the daily schedule because the area displaying daily schedule is large.</p>	 <p>Visibility is low because the area displaying daily schedule is small</p> <p>Design cohesiveness is also low because the fonts and spatial ratio for the area displaying date and the area displaying daily schedule are different</p>

Directions for Improvement

Need to modify by enlarging the area displaying daily schedule and the font size in order to address the low visibility



Translation

Confidential

48 Basic Function _ Calendar

❑ Lacks simplicity because the display of the number of weeks in the Calendar is not Flexible

- **i-Phone:** Calendar display is Flexible by showing 5 or 6 weeks depending on the month
- **S1:** Has poor utility of space because all months are displayed in 6-week format

i-Phone	S1
 <p>By displaying 5 or 6 weeks depending on the month in a Flexible manner for the month view, it has good utility of space</p>	 <p>Because it displays 6 weeks regardless of the month, it has poor utility of space as it sometimes displays unnecessary portions</p>


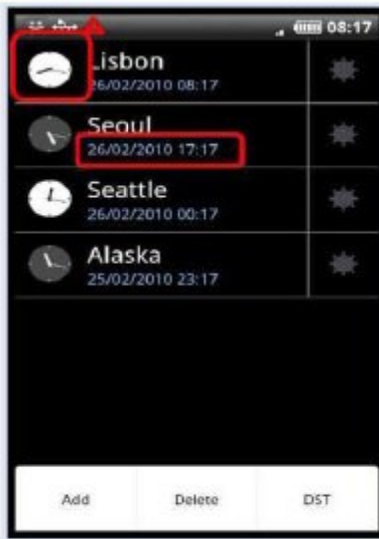
Directions for Improvement **Need to display 5 or 6 weeks depending on the month to make the calendar display Flexible**

Translation

Confidential

49. Basic Function _ World Clock

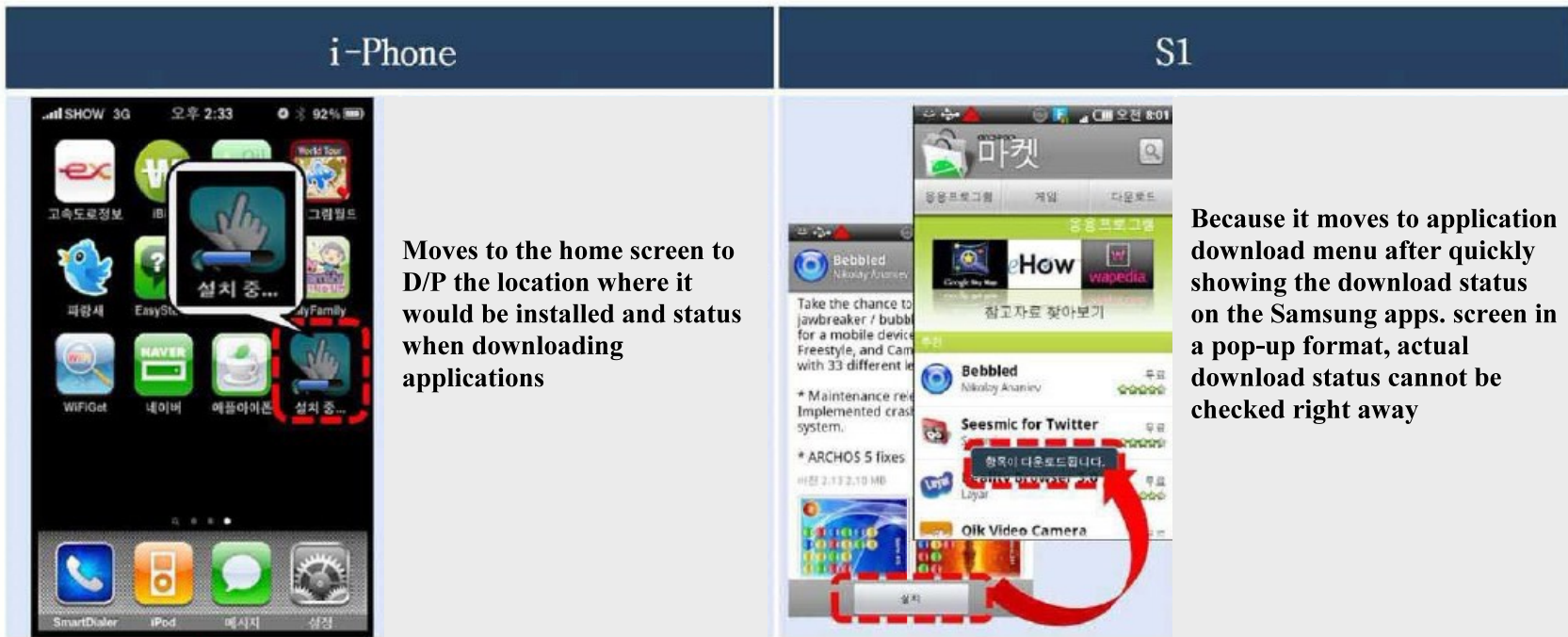
- ❑ **The World Clock screen is not very considerate toward users**
 - **i-Phone: Displays the second hand on the clock and information about Yesterday and Today**
 - **S1: It is difficult to recognize because there is no second hand on the clock and date is displayed**

i-Phone	S1
 <p data-bbox="611 769 926 996">By displaying the second hand on the clock and information about Today and Yesterday, users can easily notice the time difference between different countries</p>	 <p data-bbox="1394 769 1709 962">Not very considerate of users because the second hand on the clock and information about Today and Yesterday are not displayed.</p>
<p data-bbox="239 1228 380 1278">Directions for Improvement</p>	<p data-bbox="432 1206 1654 1239">Need to display the second hand on the clock and information about Today and Yesterday</p>

50. Browsing _ Application

Doesn't show the application download status on the home screen

- i-Phone: Switches to the home screen where the application would be installed to show the application installation status
- S1: Download pop-up window appears inside Samsung apps.



Directions for Improvement **Need to modify to show the icon to be installed and the installation status on the home screen**

51. Browsing _ Web Browser



❑ Can't create folders inside Bookmark

- i-Phone: Offers a function that allows you to create sub-folders down to 5 Depths
- S1: Folders cannot be created inside Bookmark

i-Phone	S1
 <p data-bbox="661 873 976 1016">5 Depths of sub-folders can be created by repeating “add new folder” within a folder</p>	 <p data-bbox="1470 840 1827 1016">Bookmark management is not easy because you can only check with the bookmark list and cannot create folders.</p>
<p data-bbox="241 1293 409 1352">Directions for Improvement</p> <p data-bbox="441 1293 1459 1335">Improvement required so that folder creation function can be implemented</p>	

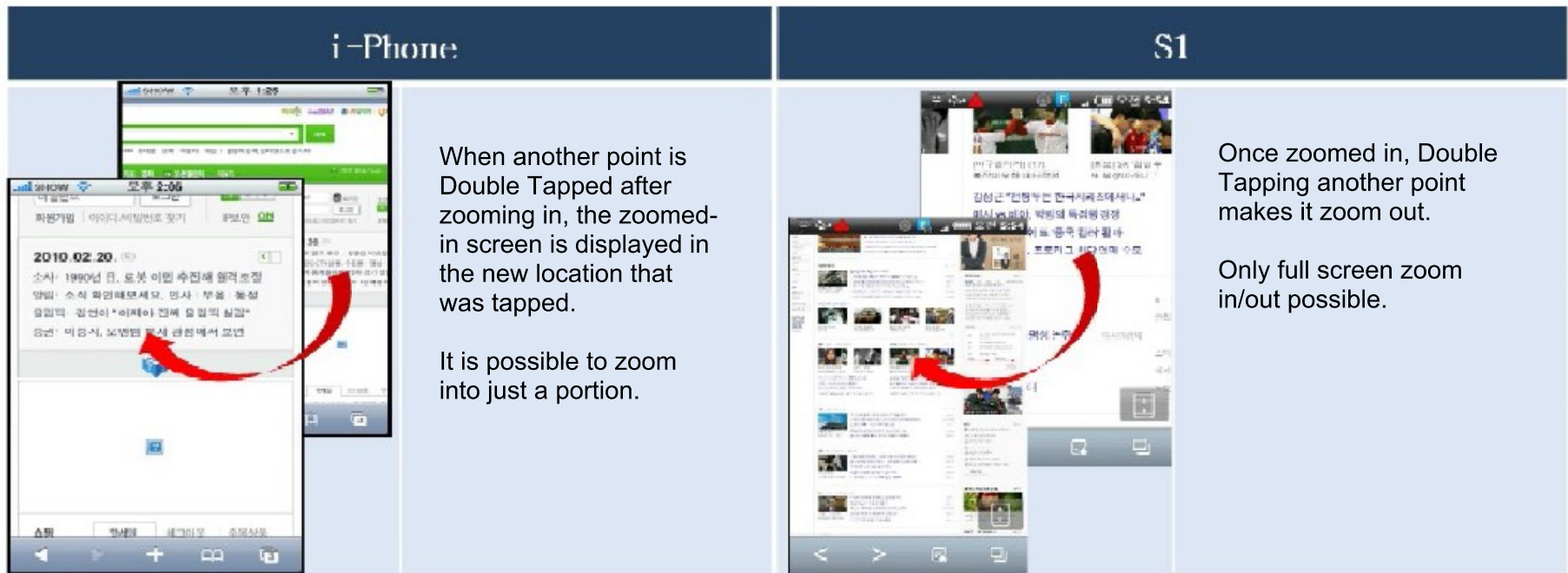
52. Browsing _ Web Browser

- ❑ **There is no menu for going back to the previous screen when playing a Youtube video**
 - **i-Phone:** There is an “end video” key at the top left corner at all times when playing video files
 - **S1:** There is no “end video” key on the touch screen in the screen playing Youtube video

i-Phone	S1
 <p data-bbox="676 786 1010 1110">It's convenient to use because there is a “finish” touch key that allows you to go back to previous screen in the top left corner at all times when playing Youtube videos on iPhone</p>	 <p data-bbox="1493 796 1856 1081">When playing Youtube videos on S1, there is no key to go back to previous screen or end the video on the screen. It's inconvenient because it's only possible to do so with a hard key.</p>
<p data-bbox="268 1290 432 1345">Directions for Improvement</p>	<p data-bbox="470 1256 1885 1323">Has to make it so that it supports a menu that can go back to the previous screen even from touch screen when playing video files</p>

53. Browsing _ Web Browser

- ☐
- **i-Phone:** When another point is double tapped after zooming in, moves to the different portion and zooms in
- **S1:** After the screen has been expanded and another point is Double tapped, the screen reduces to the original size.



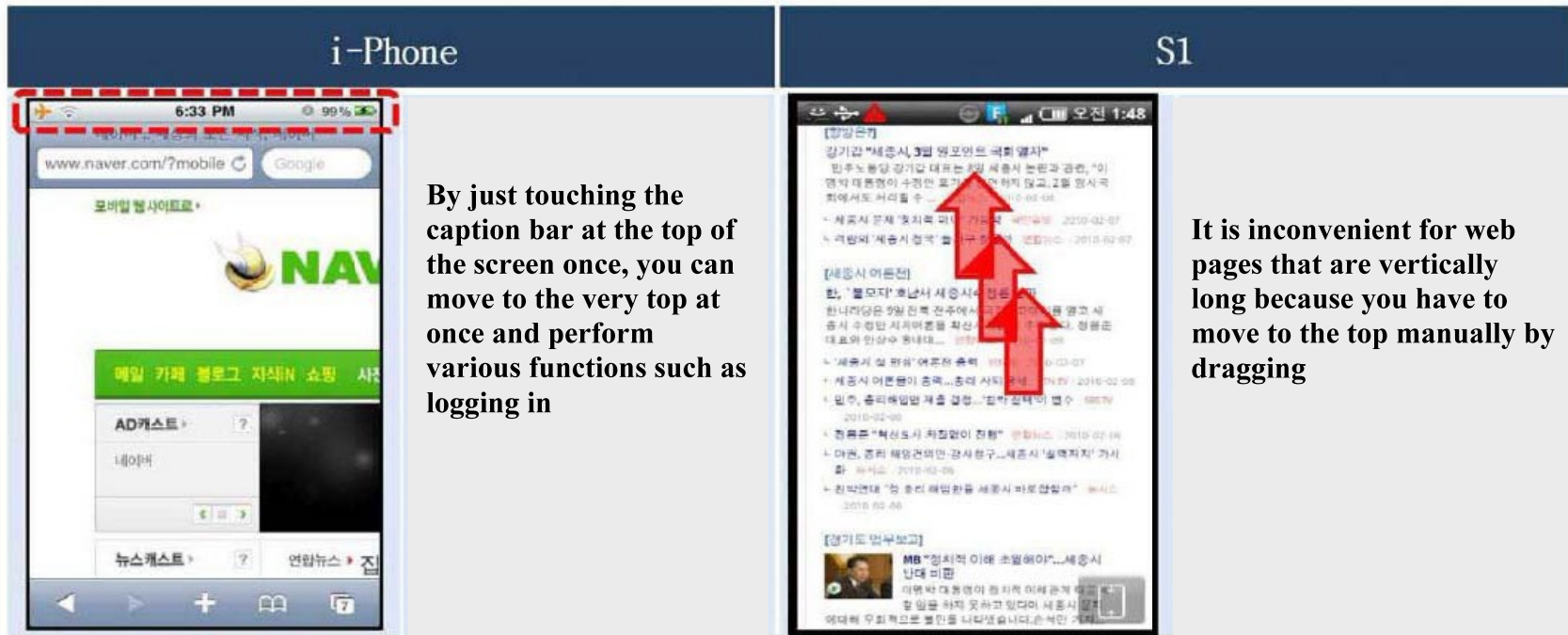
Improvement Double Tap zoom in/out function needs to be supplemented.

Translation

Confidential

54. Browsing _ Web Browser

- ❑ It is inconvenient because you cannot move to the top of the page at once
 - i-Phone: It moves to the very top of the page at once if you touch the caption bar at the top of the screen
 - S1: Needs to be dragged to move to the very top



By just touching the caption bar at the top of the screen once, you can move to the very top at once and perform various functions such as logging in



It is inconvenient for web pages that are vertically long because you have to move to the top manually by dragging

Directions for Improvement Add a function that allows you to move to a desired location at once during web surfing

55. Browsing _ Web Browser



□ In landscape mode, the menu bar at the bottom takes up more space compared to the iPhone

- **i-Phone: Takes up about 10%. (Total: 50mm, Menu Bar at the Bottom: 5mm).**
- **S1: Takes up approximately 18%. (Total: 52mm, Menu Bar at the Bottom: 9 mm).**

i-Phone	S1
 <p>The menu bar at the bottom is small.</p>	 <p>The menu bar at the bottom is large.</p>
<p>Directions for Improvement</p>	<p>Would prefer to reduce the size of the menu bar at the bottom by about 10% in landscape mode</p>

56. Browsing _ Web Browser

- ❑ **It is difficult to figure out the meaning of the star-shaped icon (Add to Bookmarks).**
 - **i-Phone:** You can easily tell by the “+” symbol
 - **S1:** It's difficult to convey the meaning of the star-shaped icon on the top left

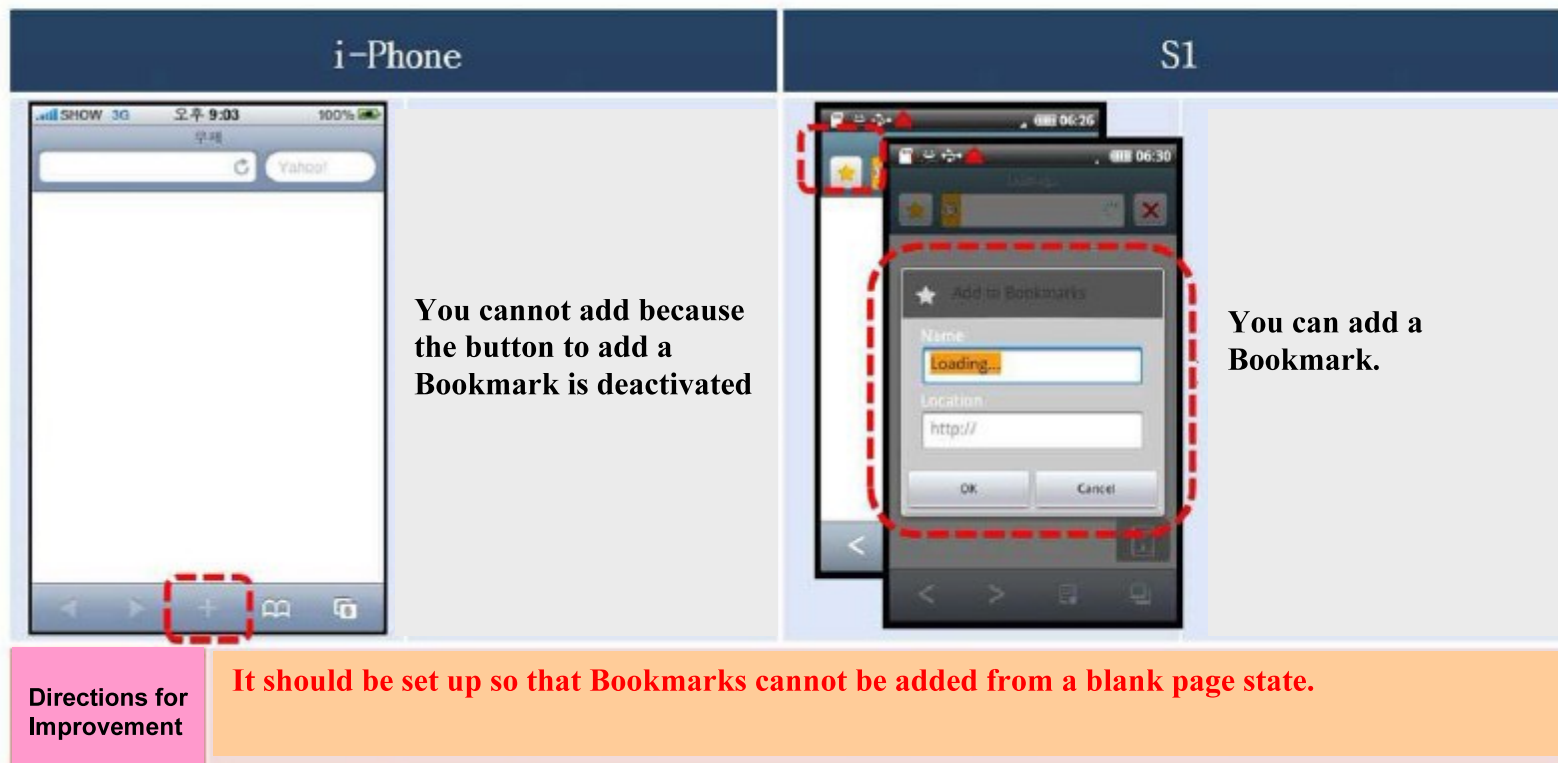
i-Phone	S1
 <p data-bbox="636 853 974 987">You can figure out the meaning of “to add” just from the “+” symbol alone</p>	 <p data-bbox="1444 853 1791 954">It is difficult to figure out the meaning of the shape of a star</p>
<p data-bbox="247 1270 384 1317">Directions for Improvement</p>	<p data-bbox="443 1253 1440 1283">Please change to an icon or a symbol (“+”) that users can easily recognize.</p>

Translation

Confidential

57. Browsing _ Web Browser

- ❑ **Add to Bookmarks function from blank pages is unnecessary.**
 - **i-Phone: You cannot add a Bookmark.**
 - **S1: You can add a Bookmark.**

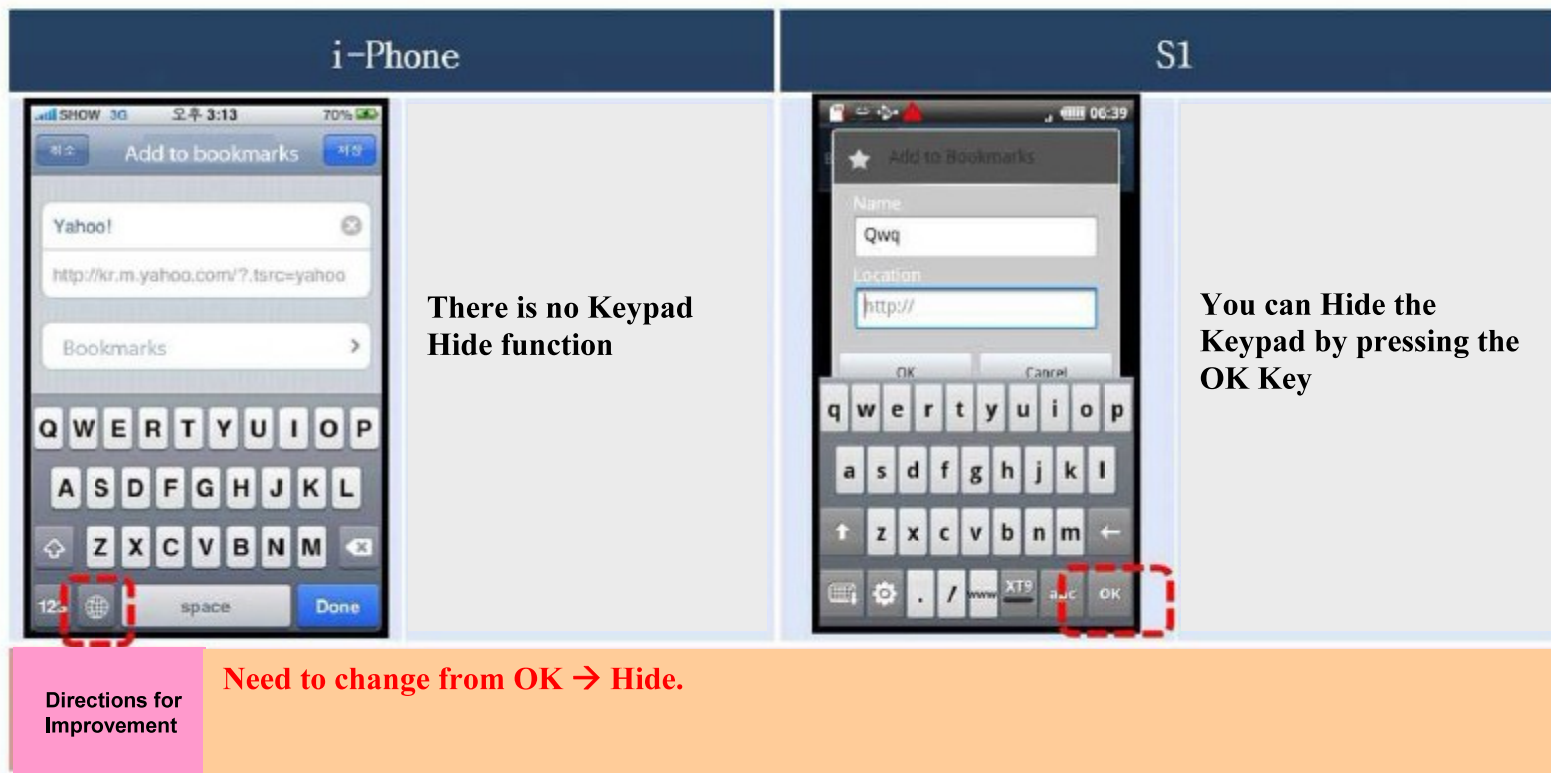


Translation

Confidential

58. Browsing _ Web Browser

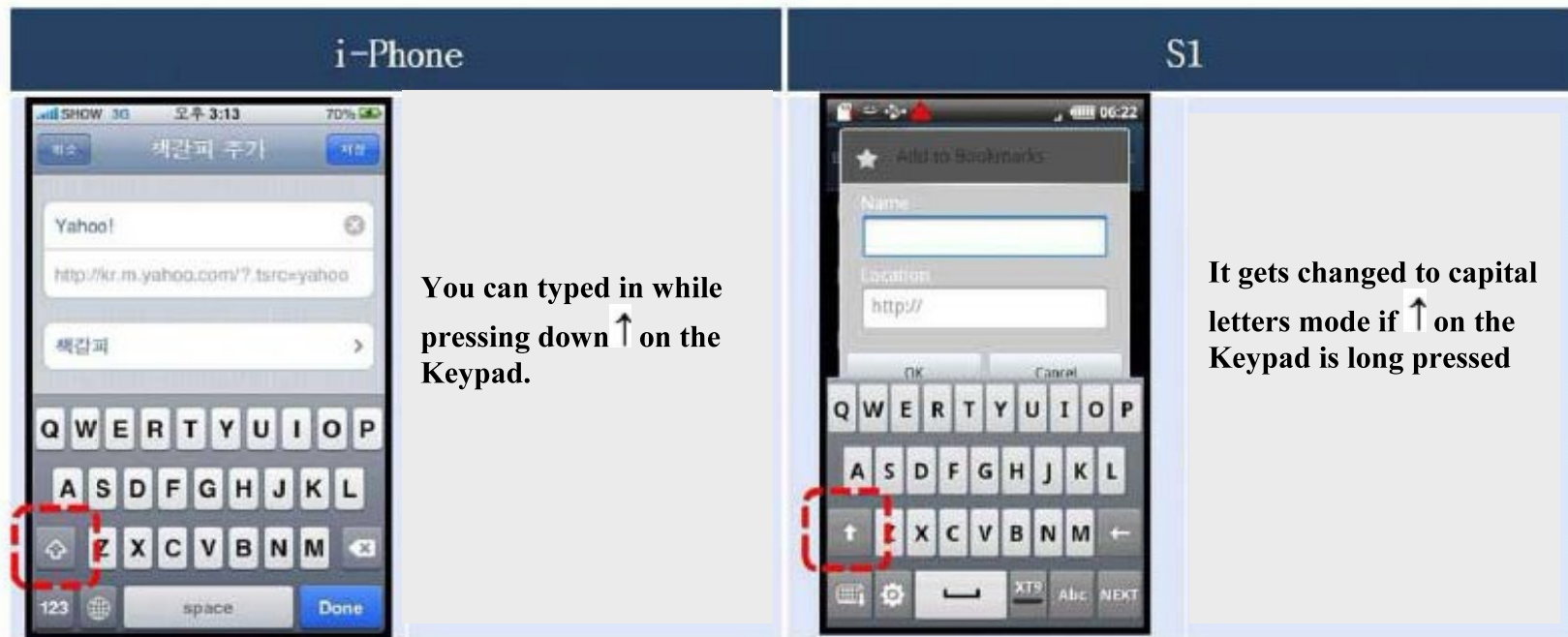
- ❑ **It is difficult to figure out the meaning of the OK Key in the keypad.**
 - **i-Phone:** The language gets changed if the icon is pressed..
 - **S1:** It is difficult to convey the meaning of the OK Key icon.



59. Browsing _ Web Browser

❑ Caps Lock for English is not indicated.

- i-Phone: It gets capitalized if text is typed in while pressing down ↑ on the keypad (same input method as a computer)
- S1: It gets changed to capital letters mode if the ↑ key is long pressed.



Directions for Improvement

Must let the users know that the status has been switched to English capital letters

Translation

Confidential

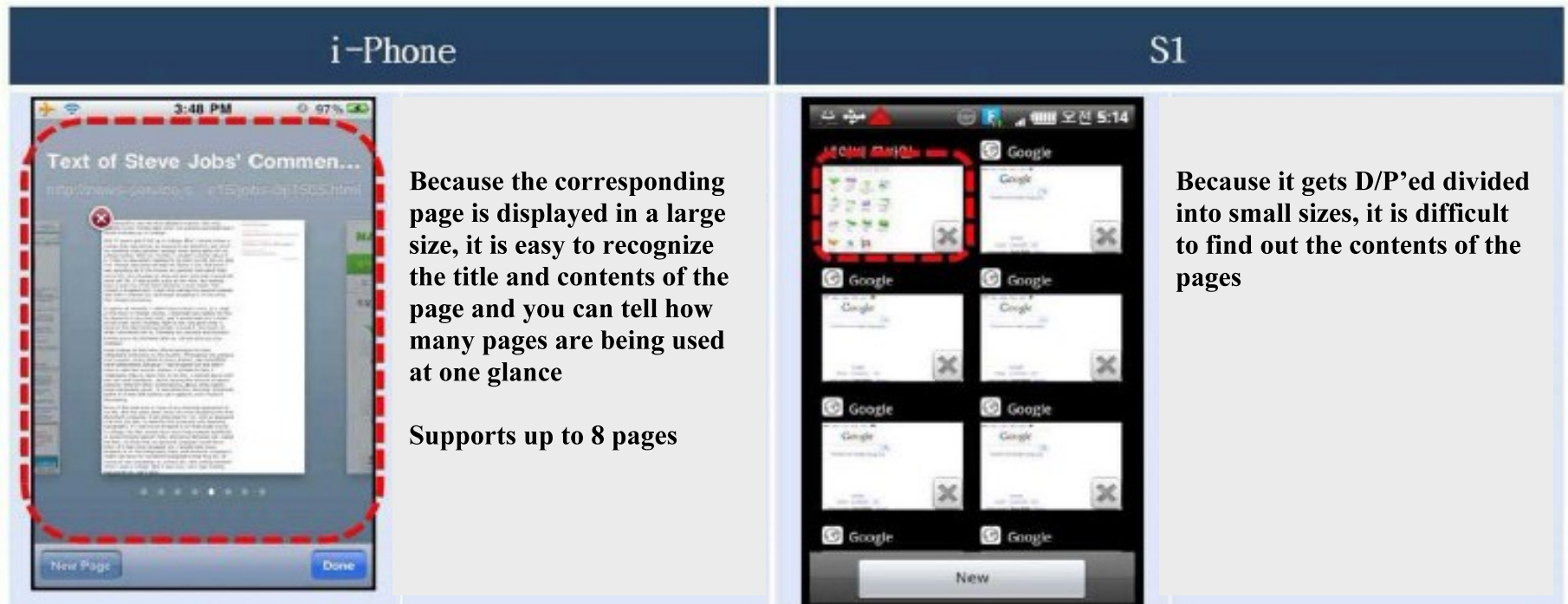
60. Browsing _ Web Browser

- ❑ **Functional options for moving up and down the screen are limited**
 - **i-Phone: You can move up and down the screen in 2 methods of “Drag & Double Tap”**
 - **S1: You can only move up and down the screen by “Drag”**

i-Phone	S1
 <p data-bbox="304 848 535 915">2 Ways</p> <p data-bbox="611 803 951 908">There are 2 methods, Drag and Double Tap, for moving on the screen</p>	 <p data-bbox="1102 831 1270 966">Just 1 Way</p> <p data-bbox="1396 803 1686 908">There is only one motion, Drag, for moving on the screen</p> <p data-bbox="1396 949 1661 1021">The user has no authority to choose</p>
<p data-bbox="241 1223 388 1278">Directions for Improvement</p> <p data-bbox="430 1201 1493 1239">Add various functions for moving up and down that users can easily recognize</p>	

61. Browsing _ Web Browser

- ❑ It is difficult to figure out the contents when transitioning to web pages because Thumbnails are too small in size
 - i-Phone: It is easy to figure out the contents because the number of open pages and the sizes of each page are large
 - S1: It is difficult to figure out the contents at one glance because the size of the pages is small



Directions for Improvement



Increase the size of the Thumbnails so that users can check the page contents at one glance

Translation

Confidential

62. Connectivity _ PC Program

- ❑ **Does not support the KIES App download for installing large-capacity Applications (10MB or larger)**
 - **i-Phone: You can synchronize with your mobile device by downloading the Application from iTunes PC Tool**
 - **S1: Kies PC Tool does not support the function to download Applications**

i-Phone	Aries
 <p>It is implemented so that music, videos and applications can be synchronized</p>	 <p>Only supports the Music, photo and video file sync and Kies does not support the convenience function for downloading large-size applications</p> <p>User satisfaction could be low in terms of speed/fees because you can only download through the mobile device's packet connection</p>
<p>Directions for Improvement Need to implement an efficient method for downloading and installing large-capacity applications</p>	

Translation

Confidential

63. Connectivity _ PC Program

- ❑ Does not show device usage information in detail by content.
 - i-Phone: Device usage information by type is always displayed at the bottom right corner of the screen
 - S1: Only the amount used is displayed out of the total capacity

i-Phone	Aries
 <p>*Categorized by Audio, Video, Photos, Free Space, etc. *Once the device is connected, it's always displayed</p>	 <p>*You can only check if you run the device explorer, and it is only displayed in amount used/total capacity</p>

Directions for Improvement


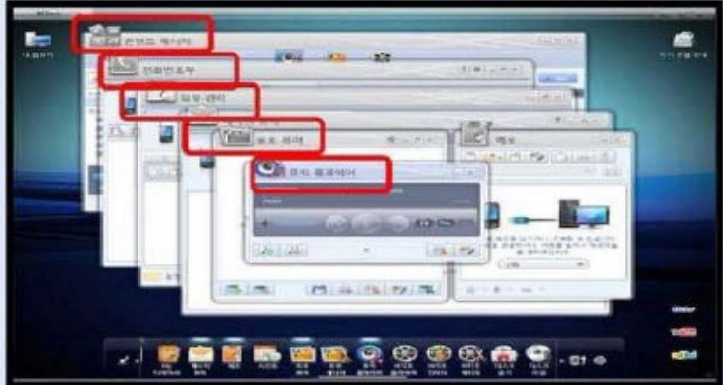
The device's capacity information should be categorized by content and shown in real time

64. Connectivity _ PC Program

Translation

Confidential

- Screen looks complicated because each Main function exists in a separate window
 - i-Phone: It simply consists of one main window that is divided into left/right frames
 - S1: Any time a function gets run in widget form, it gets displayed with a new window

i-Phone	Aries
	
<p>* Left Side: Categories</p> <p>* Right Side: Detailed information regarding the selected category</p> <p>-> Excellent categorization of functions and intuitiveness</p>	<p>* For each widget, a separate window is opened</p> <p>-> As the number of windows increases, the intuitiveness decreases</p>

Directions for Improvement



Need a design which allows many functions to be used in a single window

Translation

Confidential

65. Connectivity _ PC Program

- **There is no function to synchronize contacts and daily schedule information in frequently used accounts**
 - **i-Phone:** You can immediately synchronize the information saved on the corresponding server by selecting the account
 - **S1:** In order to synchronize, you have to open the file saved on a local PC or add/edit them manually

i-Phone	Aries
 <p>Without any additional works such as adding/editing, contacts saved in frequently used email accounts (Google contact, Windows contact, Yahoo Address Book, Outlook) can be easily synchronized.</p>	 <p>You can synchronize with the device only after adding/editing to phonebook and loading the file (Only supports Outlook synchronization)</p>
<p>Directions for Improvement Need a function that immediately synchronizes contacts and daily schedule data saved in the account server</p>	




Translation

Confidential

66. Connectivity _ PC Program

□ You have to synchronize with the device by individually running applications for each function

- i-Phone: If synchronization preferences are configured for each category, the synchronization automatically takes place when device is connected
- S1: You have to synchronize after loading files by running applications for each function


i-Phone	Aries
 <p data-bbox="619 798 997 1092">If synchronization preferences are configured for each category, when connected, all contents are automatically synchronized. (However, it is possible to synchronize manually if necessary)</p> 	 <p data-bbox="1449 814 1827 924">Can only be individually synchronized by running the function on each widget</p>
<p data-bbox="220 1310 388 1369">Directions for Improvement</p> <p data-bbox="399 1268 1848 1360">Need a function that allows synchronization preferences to be configured in a single window for each category and synchronization to happen at once when device is connected</p>	

Translation

Confidential

67. Connectivity _ PC Program

- **There is no function to save or edit downloaded Apps on the device.**
 - **i-Phone:** It allows Apps to be Backed-up on iTunes, or to be edited on the device's home screen
 - **S1:** It only allows contents to be purchased

i-Phone	Aries	
	<p>It supports the function that allows contents purchased at the App Store to be Backed-up or to be freely edited/synchronized on the device's home screen</p>	<p>Not Supported</p>
<p>Directions for Improvement</p>	<p>Kies also needs a function for Backing up and managing downloaded Apps</p>	


Translation

Confidential

68. Connectivity _ PC Program

□ Shows consideration for users by limiting App D/L capacity so that it doesn't take a long time

- i-Phone : For Apps that take too long to download, it sets restrictions to use Wi-Fi or iTunes instead
- S1: It is possible download applications regardless of the size




i-Phone	Aries
 <p data-bbox="615 803 976 1088">Induces users to use Wi-Fi connection or iTunes to download large-sized Apps that take a long time to download (Only files 20MB or smaller can be downloaded)</p>	<p data-bbox="1520 949 1724 982">Not Supported</p>
<p data-bbox="216 1315 380 1370">Directions for Improvement</p> <p data-bbox="405 1303 1770 1370">Need to show consideration for users regarding data usage fee and downloading time if content's size goes beyond a certain level</p>	

Translation

Confidential

69. Connectivity _ PC Program

- **Lacks a function that allows the user to remotely control contents on a PC from the device.**
 - **i-Phone: Music files saved in iTunes can be remotely controlled with the device using Remote**
 - **S1: Does not support a similar function**



i-Phone	Aries	
   <p>Using the Remote Application provided for free at Apple's home page, the user can remotely control music files saved in iTunes (add to the playlist, next song, shuffle, etc.) with the device as desired (* Using WiFi)</p>	-	Not Supported
Directions for Improvement	Need to consider adding a remote control function in order to enhance the Connectivity between a PC and the device	

Translation

Confidential

70. Connectivity _ PC Program

- **When creating a music playlist, it simply supports add/delete functions**
 - **i-Phone** : Automatically generates playlists by using iTunes' Genius & Genius Mix.
 - **S1**: Does not support a similar function

i-Phone	Aries		
 	<p>* Genius : If the user clicks the Genius button after selecting a song, it automatically finds songs that match well with the selected music and creates a playlist.</p> <p>* Genius Mix : It groups songs saved in iTunes according to genre, and automatically creates albums -> the user can listen to songs according to one's preference</p>	-	Not Supported
Directions for Improvement	Need to consider adding a function that easily creates playlists based on the user's preferences		

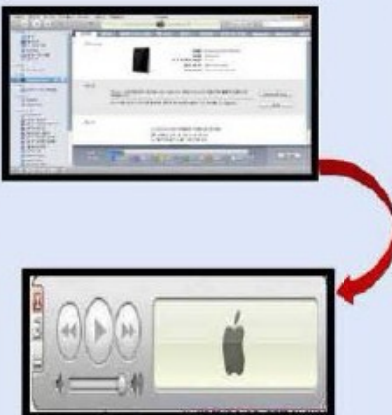

Translation

Confidential

71. Connectivity _ PC Program

□ Does not support the minimized mode for program functions.

- i-Phone: It offers a function to minimize (Mini-Player) the main screen using a short-cut key and menu.
- S1: Does not support Mini-Player mode and only supports full view mode



i-Phone	Aries
 <p data-bbox="615 803 991 977">The main program can be transformed into a “Mini-Player,” enabling contents to be played and monitored in the minimized state</p> <p data-bbox="615 1021 991 1055">-> Short-cut key (Ctrl – M)</p>	 <p data-bbox="1455 803 1759 944">Only supports the full screen view mode “Play” has to be run separately to use</p>
<p data-bbox="394 1285 1774 1323">Need to consider implementing a Mini-Player mode that allows easy use of the program</p> <p data-bbox="205 1330 373 1386">Directions for Improvement</p>	

Translation

Confidential

72. Connectivity _ PC Program

- It is difficult to use because the PC Program Quick Guide is in Text and images
 - i-Phone: It provides a simple user manual in video format
 - S1: It provides the basic usage instructions in text and images only

i-Phone	Aries
 <p>Quick Guide is provided in video format, allowing the user to use the program easily</p>	 <p>It is provided in simple Text format with pictures</p>
<p>Directions for Improvement Provide simple user-guide tips in video format like iTunes to increase convenience of use</p>	



Translation

Confidential

73. Connectivity _ PC Program

□ It is difficult to use because the Help text for the PC program is not organized into detailed categories

- i-Phone : Help text is organized into specific categories such as information and keyboard short-cuts and offers help text for each category
- S1: Basic user instructions are provided in Text and images only

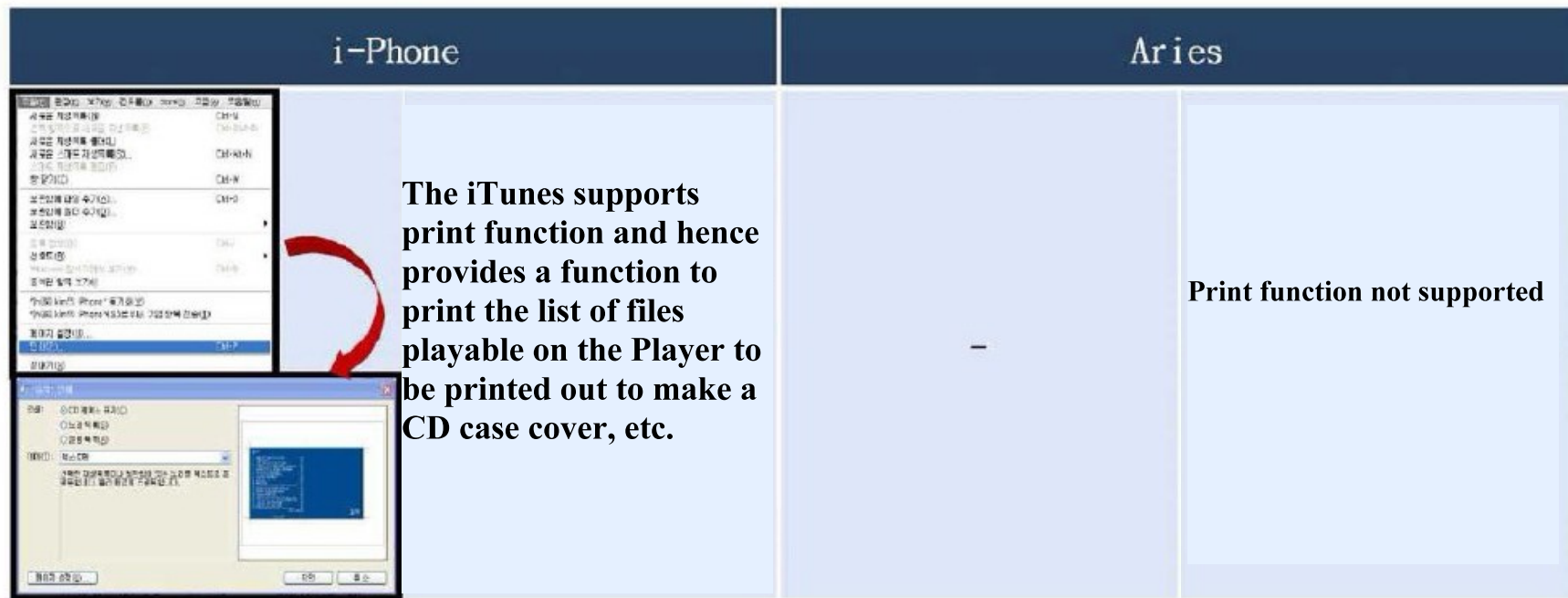
i-Phone	Aries
 <p>The screenshot shows the iTunes Help menu with several items highlighted in red boxes: 'iTunes Help (I)', 'Start iTunes (W)', 'Keyboard Shortcuts (K)', 'iPod User Guides (O)', 'iPhone User Guide (E)', and 'Apple TV Guide (V)'. Other items include 'Apple Service and Support (L)', 'Provide iTunes Feedback (P)', 'Check for Updates (U)', 'Run Diagnostics...', and 'About iTunes'.</p> <p>Links are provided so that Help information on how to run iTunes and manuals for Apple products can be directly downloaded, and various help information for improving convenience of use, such as keyboard short-cuts, is provided</p>	 <p>The screenshot shows the Kies Quick Guide Help menu with 'Quick Guide Help' highlighted in a red box. Other items include 'Updates', 'Set up environments', 'Recover Driver', 'Program Information', and 'Close'. Keyboard shortcuts 'F1' and 'Alt+F4' are also visible.</p> <p>Only Help texts about the Kies program and quick guide on how to run it are provided</p>
<p>Directions for Improvement Need to provide a diverse User guide manual like iTunes</p>	

Translation

Confidential

74. Connectivity _ PC Program

- It is inconvenient because Samsung Kies program does not support a print function
 - i-Phone: It provides a function for printing CD case covers, song lists, album lists, etc.
 - S1: The print function is not supported.



The iTunes supports print function and hence provides a function to print the list of files playable on the Player to be printed out to make a CD case cover, etc.

Print function not supported

Directions for Improvement Need to provide users with a variety of functions by offering a print function like iTunes

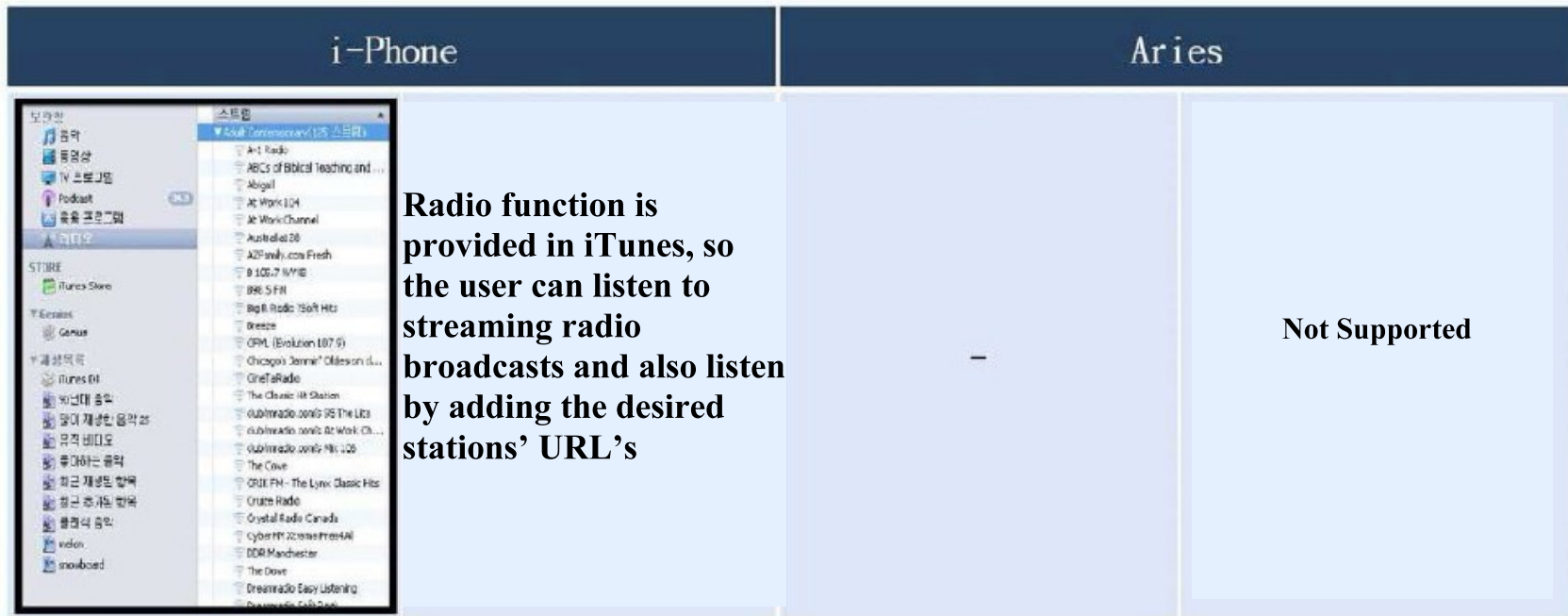
Translation

Confidential

75. Connectivity _ PC Program

□ Does not support the streaming radio function

- i-Phone: You can connect to various streaming radio stations on iTunes
- S1: Radio function is not supported



Radio function is provided in iTunes, so the user can listen to streaming radio broadcasts and also listen by adding the desired stations' URL's

Not Supported

Directions for Improvement **Need to be able to provide a variety of services by adding a radio function**



Translation

Confidential

76. Connectivity _ PC Program

□ It is inconvenient to use because the contents saved on the PC get deleted after deleting the program

- i-Phone : Even if the program is re-installed after being deleted, files previously backed up appear again in entirety
- S1: If Kies program is re-installed after being deleted, it needs to be reconfigured because there is no previously backed up data

i-Phone	Aries
 <p>Even if a program is deleted and then re-installed, files saved in storage (music, photos, videos, application programs) can still be used</p>	 <p>All music, photo and video data synced to the PC get deleted when the program is deleted and have to be re-installed and synced.</p>

Directions for Improvement Need to modify so that the previously saved data can be brought back even when the program is re-installed after being deleted

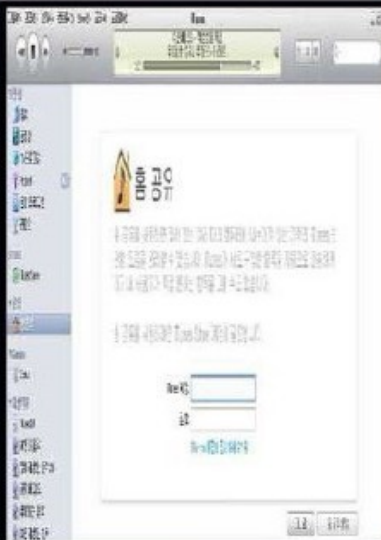
Translation

Confidential

77. Connectivity _ PC Program

□ You can't share files amongst multiple computers connected by the PC Program

- **i-Phone:** Files can be transferred between multiple computers by configuring home sharing in iTunes
- **S1:** Kies program does not have a function for sharing files amongst computers

i-Phone	Aries	
	<p>By configuring home sharing settings in iTunes, music, videos and application programs can be shared amongst up to 5 authorized computers at home (can use by logging in with the same account on each computer)</p>	<p>Not Supported</p>
<p>Directions for Improvement</p>	<p>Can increase convenience of use for the users in the same network by adding a function for transferring files between PCs</p>	



Translation

Confidential

78. Connectivity _ Bluetooth

□ It is difficult to distinguish the searched BT Device list

- i-Phone : It only displays Bluetooth Devices that are in Pairing status
- S1: It shows all Devices that are in Bluetooth On status nearby

i-Phone	Aries
 <p>▪ How to Run ① Turn BT On</p> <p>▪ Screen Display Only displays BT Devices in Pairing mode</p>	 <p>▪ How to Run ① Turn BT On</p> <p>▪ Screen Display Searches and shows all Devices that are in BT On status</p>

Directions for Improvement **Modification is needed so that no unnecessary Devices get detected when searching for BT**

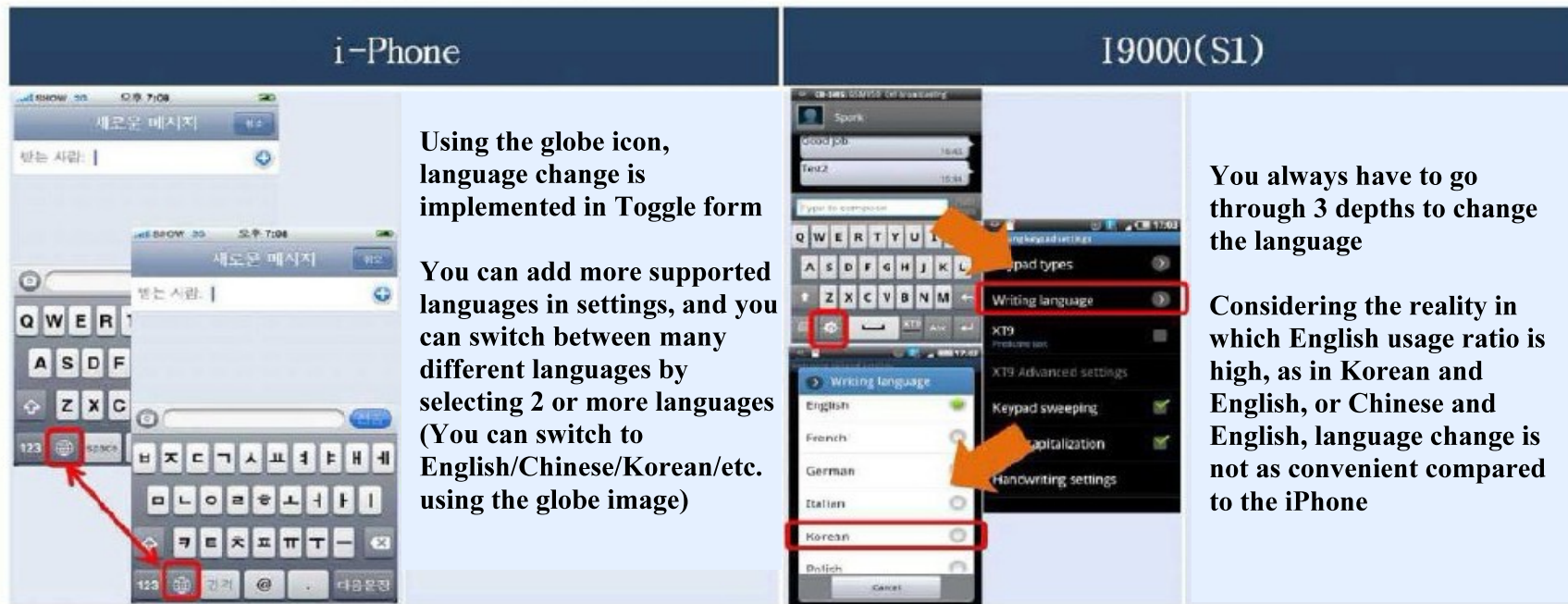
Translation

Confidential

79. Messaging _ SMS

□ It is difficult to switch between languages (English ↔ Korean)

- i-Phone: You can change the language using the Toggle button (input language can be selected in Settings)
- S1: You always have to go through keyboard setting- language setting-language selection (3 depths) to change the language





Directions for Improvement Modification is desired so that keyboard language setting can support Toggle method like the iPhone and be changed in 1 depth

80. Messaging _ SMS

□ Add to Contacts function when composing text messages is not easily recognizable

- i-Phone: "Add to Contacts" button exists so the other person's contact information can be saved to Contacts right away
- S1: It is difficult to recognize the display for the Add to Contacts function



i-Phone	I9000(S1)
 <p>"Add to Contacts" button exists so the other person's contact information can be saved to contacts right away</p>	 <p>You can save the other person's contact information by selecting the image of the person's face</p> <p>However, users cannot infer that the action to save contact information just from the image</p>
<p>Directions for Improvement</p>	<p>Need to modify the image or add a new image so that users can recognize the contact information saving function at once</p>

Confidential

81. Messaging _ SMS

Character/Symbol switch key shows the current status

- i-Phone: Character/symbol switch icon displays the mode scheduled to be switched to
- S1: Shows the mode currently being used

i-Phone	I9000(S1)
 <p>As the current input mode is ABC, the character/symbol switch button displays 123</p> <p>As the purpose of the corresponding key is to switch, it increases the user's recognizability by displaying the mode scheduled to be switched to</p>	 <p>Because the current mode is Abc, the character/symbol switch button displays Abc</p> <p>It attempted to show both the corresponding key's purpose and the current input mode, but since users can obviously find out the current input mode by looking at the keypad, the concept has to be changed to be like iPhone</p>



Directions for Improvement **Modify the character/symbol switch icon so that it displays the mode scheduled to be switched to**

Confidential

82. Messaging _ SMS

❑ You have to manually switch back once a special character is entered in the text input mode

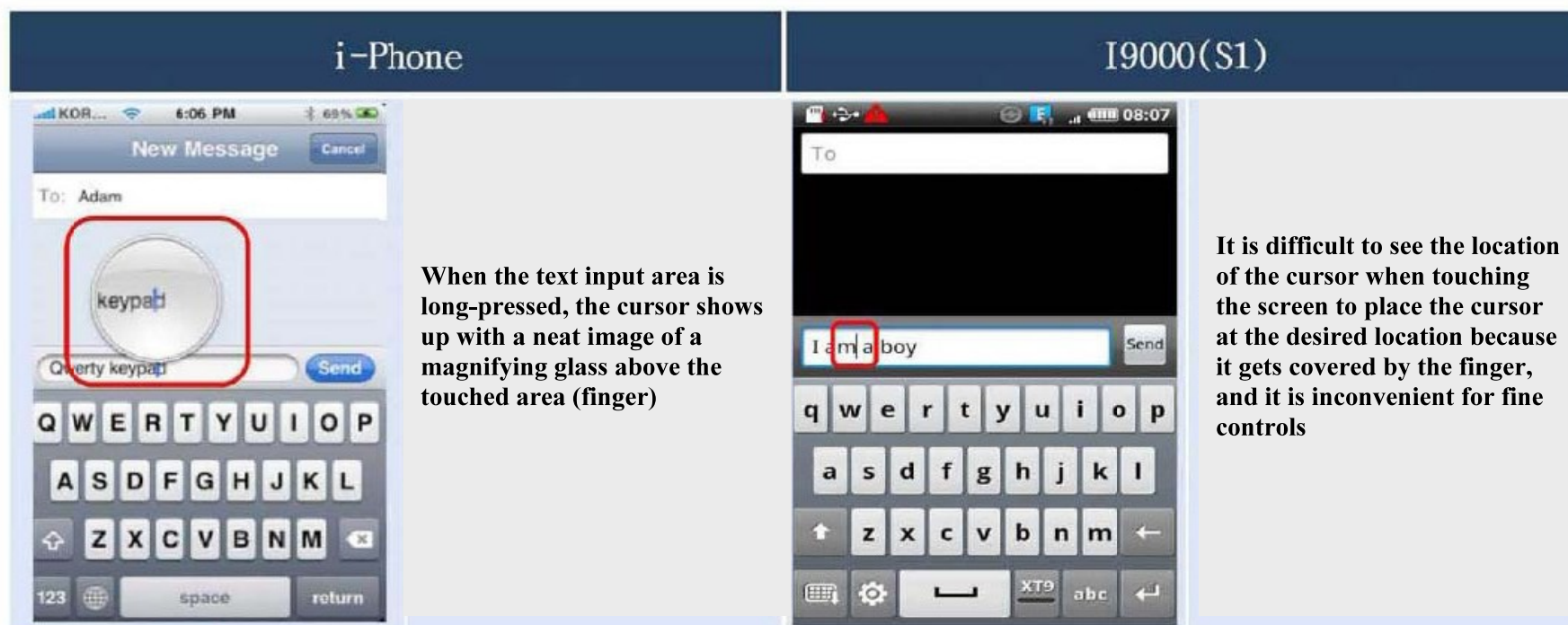
- iPhone: When a special character is typed in in the text input mode, the keyboard automatically switches back to the text input mode
- S1: You have to manually switch back after typing in a special character by entering the special character mode

i-Phone	I9000(S1)
 <p>You can immediately type in special characters by moving to the direction of the keypad while pressing the “123” button on the bottom left corner in the text input mode, and it returns to text input mode after a special character is typed in</p>	 <p>After entering a special character by pressing the input mode switch button at the right bottom, the applicable part should be pressed again to return to manual</p>
<p>Directions for Improvement</p>	<p>Need improvement so that the keyboard automatically switches back without having to switch modes when typing in special characters</p>

83. Messaging _ SMS

❑ It is difficult to move cursor when inputting text

- **i-Phone:** Easy to move the cursor with a magnifying glass appearing over the area touched
- **S1:** Cannot see where the cursor is when selecting cursor location by touch because it gets covered by the finger





Directions for Improvement

**Need improvement so that the view doesn't appear on the touched area (finger) and get covered
Need a function like a magnifying glass for fine controls**

Translation
Confidential

84. Messaging _ SMS

- In the Abc mode of the text message entry system, additional Latin characters such as ‘À Ê Ï Õ’ cannot be entered
 - i-Phone: In the Abc mode, if the vowel button is long-pressed, an entry window containing additional Latin characters is shown
 - S1 : Additional Latin characters can be entered only after changing the language mode



i-Phone	I9000(S1)
 <p>When A is long-pressed in the ABC mode, additional Latin characters (German, French, and Spanish) can be immediately typed in</p>	 <p>Input language must be changed to German, French, Spanish, etc. in order to enter additional Latin characters</p>
<p>Directions for Improvement</p>	<p>Modification requested to enable input of additional Latin characters directly from the Abc mode as in iPhone</p>

Translation

Confidential

85. Messaging _ SMS

- ☐ Many typographical errors occur while entering text because the keys on the keypad are not isolated enough from each other
 - i-Phone: Although the size of the buttons is small, there is a large space between the keys horizontally/vertically
 - S1 : The size of the buttons is large, but space between the keys is small

i-Phone		I9000(S1)		
	The size of the buttons is small but the space between buttons is large		The size of the buttons is large but the space between buttons is small	
		i-phone	I9000 (S1)	S1 ratio (compared to i-phone)
	Size of the A button	0.95 * 0.48	1 * 0.5	110%
	Vertical spacing between keys	0.38	0.3	79%
	Horizontal spacing between keys	3	2	67%
Directions for Improvement	The buttons are larger by 10% but the space between buttons is smaller by 21% vertically and smaller by 33% horizontally. Accordingly, additional horizontal/vertical space between keys requested.			



Translation

Confidential

86. Messaging _ SMS

❑ The content from the body of the message shown on the messaging list is short

- **i-Phone:** Shows two lines of content on the messaging list
- **S1** : Shows only one line of content, and even that shows less content compared to i-Phone

i-Phone	I9000(S1)
 <p>Shows more than approximately 40 English characters from the message list</p>	 <p>Shows only one line and only about 20 English characters are displayed</p>
<p>Directions for Improvement</p>	<p>Increase the number of characters displayed on the messaging list (For shorter messages consisting of more than 40 characters, can grasp the content without detailed view)</p>



Translation

Confidential

87. Messaging _ SMS

❑ Hard to enter “+” when entering recipient’s phone number

- i-Phone: Easy to input “+” because the Qwerty keyboard shows up
- S1 : “+” cannot be entered with the 3 X 4 keypad



i-Phone	I9000(S1)
 <p>Easy to input “+” using Qwerty keyboard</p> <p>(It is a useful feature for international calls, and long-pressing 0 will enter it. Also used frequently for sending international SMS)</p>	 <p>Can be entered by long-pressing 0 for dialing, but for entering SMS recipient, can only be entered by changing the keypad to 123 mode and going to page 4</p>
<p>Directions for Improvement</p>	<p>Must support input of “+” for entering SMS recipients</p>

Translation

Confidential

88. Messaging _ SMS

- ❑ **When attempting to select and delete SMS under one name, it is hard to select multiples**
 - **i-Phone:** When the content of the SMS is pressed in the SMS selection window, the message can be selected/cancelled.
 - **S1** : Must select only from the selection area to the right of the SMS.

i-Phone	I9000(S1)
 <p data-bbox="592 624 953 1184">In the delete list selection window, SMS can be selected by choosing the area indicated by ○ on the left or the relevant line</p>	 <p data-bbox="1377 624 1766 1184">In the delete list selection window, SMS can only be selected by selecting the check box area on the right</p>
<p>Directions for Improvement</p>	<p>Must make the selection area wide in the delete list selection window.</p>

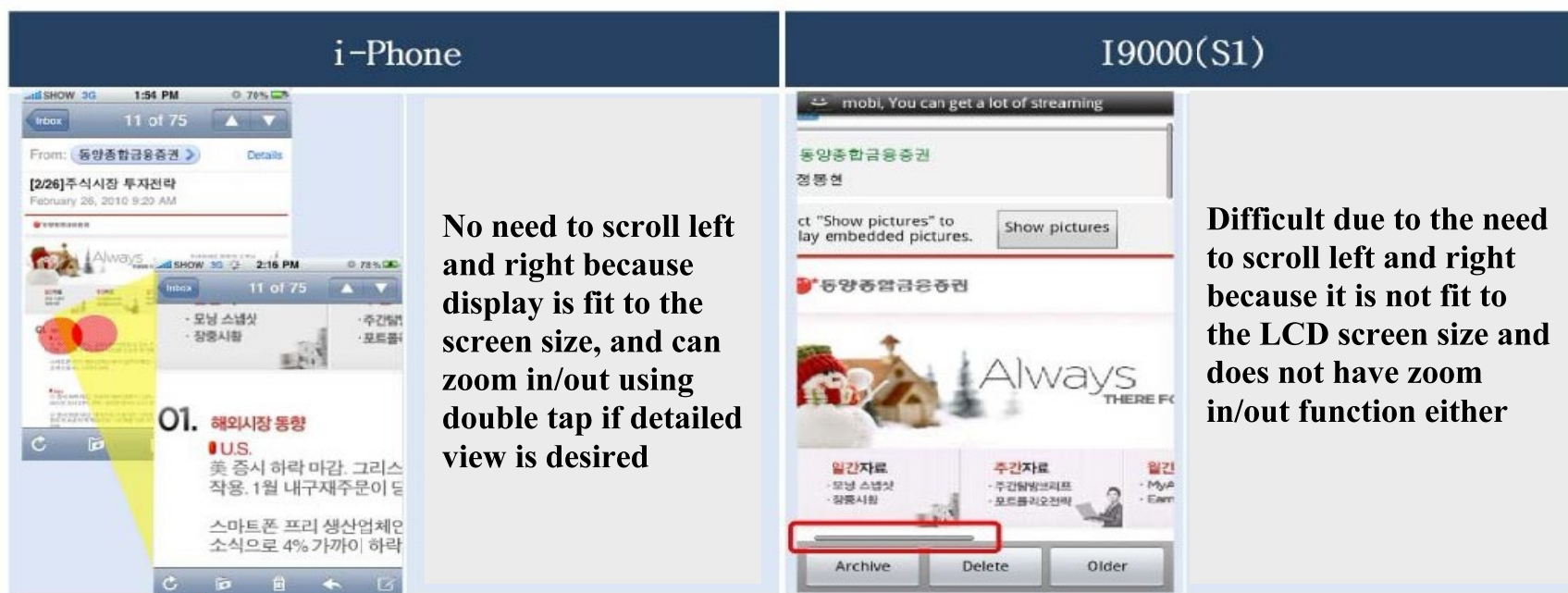
Translation

Confidential

89. Messaging _ E-mail

❑ It is inconvenient to scroll left and right

- i-Phone: Mail can be seen in one glance because it is fit to the screen size
- S1 : Must scroll left and right because the display is not fit to screen size



No need to scroll left and right because display is fit to the screen size, and can zoom in/out using double tap if detailed view is desired

Difficult due to the need to scroll left and right because it is not fit to the LCD screen size and does not have zoom in/out function either

Directions for Improvement

Display should fit the screen size and zoom in/out function needs to be added

Translation
Confidential

90. Messaging _ E-mail

- ❑ **Does not automatically refresh when entering the email inbox**
 - i-Phone: No matter what the situation is, mailboxes are updated when entering the email inbox
 - S1 : There is the inconvenience of having to select Refresh from the hidden menu

i-Phone	I9000(S1)
	<p>Auto update is executed regardless of the path by which the inbox is accessed</p>
	<p>Update executed only if Refresh button is selected after choosing the hidden menu</p>
<p>Directions for Improvement Must provide user satisfaction through auto update</p>	

Translation

Confidential

91. Messaging _ SNS

☐ Must go through multiple steps to upload photographs

- iPhone: Linked with the camera so the photographs can be immediately uploaded after being taken
- S1 : Camera function linked



Camera function exists on SNS through its own button, so photographs can be uploaded immediately after being taken



Inconvenient to have to go to main menu in order to upload photographs after taking them

Directions for Improvement **Must be improved so that photo/video uploading becomes more convenient during SNS operation**

Translation
Confidential

92. Messaging _ SNS

- Auto keypad appears in random situations
 - i-Phone: Auto keypad does not appear when accessing Profile or Friend
 - S1 : Auto keypad appears when accessing Profile or Friend


i-Phone	I9000(S1)
 <p>Auto keypad does not appear when accessing Profile or Friend</p>	 <p>Because a user mostly accesses his own Profile/Friend to visually review contents (postings / friends), auto keypad may actually be an inconvenient element that covers the screen</p>
<p>Directions for Improvement Even for operations for convenience, circumstances must be considered</p>	

Translation

Confidential

93. Messaging _ SNS

- ❑ **Because the size of the posted item is small, it is not easy to visually distinguish from the poster**
 - **iPhone** : The size of the posted item is large enough so that the visual distinction is clear
 - **S1** : The size of the posted item is small, so it is hard to visually distinguish

i-Phone	I9000(S1)
 <p>Relative size of the posted item is large so it is clearly distinguishable from the poster's image, and video play button is shown for videos</p>	 <p>Size of the posted item is small relative to the poster's image, so there is no clear distinction. And no distinction between images and videos</p>
<p>Directions for Improvement</p>	<p>Should enlarge the size of the posted item to distinguish them from the poster's image</p>

Translation

Confidential

94. Messaging _ SNS

☐ **When viewing the posted image, full screen display is not available**

- **i-Phone: Converts to an image-view-specific display and displays in full screen**
- **S1 : Launches a browser and displays in a small screen**

i-Phone	I9000(S1)
 <p data-bbox="604 756 961 1008">When a posted image is selected, it converts directly to full screen display without a separate screen conversion process</p>	 <p data-bbox="1390 756 1747 1008">When a posted image is selected, it launches a separate browser, which slows down the speed. Full screen display not available</p>
<p data-bbox="210 1234 357 1285">Directions for Improvement</p>	<p data-bbox="399 1234 1564 1285">Must increase user satisfaction through display specifically for image view</p>


Translation

Confidential

95. Multimedia _ Music Player

❑ Does not provide lyric display function in the Music Player

- **i-Phone:** From iPod, if the screen is touched while music is playing, lyrics are displayed (for the supported files)
- **S1** : Does not provide lyric display function

i-Phone	S1	
	<ul style="list-style-type: none"> ▪ Execution Method <ol style="list-style-type: none"> 1. While music is playing 2. Touch the screen ▪ Lyric registration method <ol style="list-style-type: none"> 1. Go into iTunes 2. Music file registration information 3. Select tab for lyrics 4. Enter lyrics (TXT) 	<p style="text-align: center;">Not supported</p>
<p>Directions for Improvement</p>	<ol style="list-style-type: none"> 1. Need to provide a method to register lyrics <ul style="list-style-type: none"> - Need to add a function that enables registration/editing of lyrics like iTunes on KIES 2. Need to provide a function which displays lyrics while playing a music file with registered lyrics (device) 	

Translation

Confidential

96. Multimedia _ Music Player

□ Intuitiveness falls short since the Searching Index Bar is not pre-displayed.

- **i-Phone:** Due to the searching tool that is displayed on the right side, searching can be done quickly
- **S1** : Intuitiveness falls short on initial entrance because the scroll icon only appears after being touched



- Arrangement Method
 - Arranged by [Korean] Consonants
 - Arranged by Alphabet
- Search Method
 - Scroll bar is provided on the right side.

- Arrangement Method
 - Arranged by Alphabet
 - Arranged by [Korean] Consonants
- The scroll icon appears with one touch on the right column



Directions for Improvement

Need modifications to display the search scroll bar on the screen to make searching for a song convenient

97. Multimedia _ Music Player

□ Cannot control the music playback from playlist

- **i-Phone:** Can control the music playback from within the playlist through the control bar while music is playing
- **S1** : There is no control bar within the playlist. (impossible to control)

i-Phone		S1
	<ul style="list-style-type: none"> ▪ Execution Method (while playing) <ol style="list-style-type: none"> 1. Go into iPod 2. Go into playlist ▪ Screen display <ul style="list-style-type: none"> .Control bar appears at the bottom 	 <ul style="list-style-type: none"> ▪ Not supported

Directions for Improvement **Need to add the control bar function for times when entering the playlist while music is playing**



Translation

Confidential

98. Multimedia _ Music Player

□ **Inconvenient to control music play during BGM play when the LCD is off**

- **i-Phone: Control bar appears after pressing Home Key twice during BGM play**
- **S1: Control bar appears only when touching the upper disk screen after turning LCD on (hold key)**

i-Phone		S1	
	<ul style="list-style-type: none"> ▪ Execution Method (while playing) <ol style="list-style-type: none"> 1. LCD-off mode 2. Home key pressed twice ▪ Expected effects <ul style="list-style-type: none"> .Possible to control music playback through the control bar 		<ul style="list-style-type: none"> ▪ Execution Method (while playing) <ol style="list-style-type: none"> 1. LCD-off mode 2. Hold key pressed 3. Select Disk screen ▪ .Accessing the control bar through hold key and disk screen touch is a hassle

Directions for Improvement



Need improvements to enable one button access like the iPhone

Translation

Confidential

99. Multimedia _ Music Player

- Does not provide a function enabling precise control over playback location within the music file while it is playing
 - iPhone: Change in navigation speed by sections possible while music is playing (easy to navigate location)
 - S1: Change in navigation speed by sections impossible

i-Phone	S1
 <ul style="list-style-type: none"> ▪ Execution Method (while playing) <ol style="list-style-type: none"> 1. While music is playing 2. Press control bar 3. Drag to A/B/C/D section 4. Horizontal location adjustment ▪ Navigation speed by section <ul style="list-style-type: none"> .A → high speed navigation .B → 1/2 speed navigation .C → 1/4 speed navigation .D → Detailed navigation 	 <ul style="list-style-type: none"> ▪ Horizontal location adjustment after selecting the control bar section ▪ Speed adjustment impossible when control bar is moving .Requires skillfulness on the part of the user

Directions for Improvement

Need modifications to enable change in speed for navigating playback location while music is playing

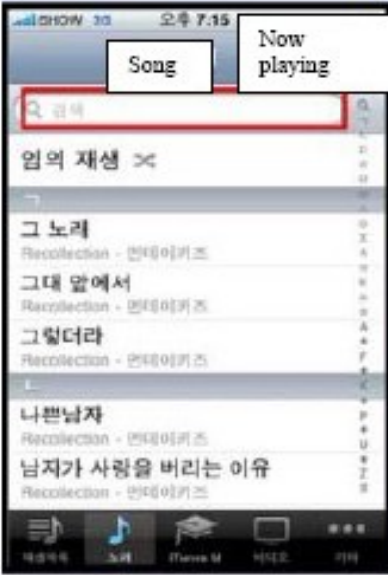
Translation

Confidential

100. Multimedia _ Music Player

□ 2-step entry method for entering search terms is a hassle

- **i-Phone:** Direct search possible at the top of the full song list
- **S1** : Access is a hassle because the search menu is contained in the second depth menu

i-Phone		S1
	<ul style="list-style-type: none"> ▪ Execution Method <ol style="list-style-type: none"> 1. Go into iPod 2. Full song list ▪ Expected effect <ul style="list-style-type: none"> . Search possible directly from list view 	<ul style="list-style-type: none"> ▪ Execution Method <ol style="list-style-type: none"> 1. Go into Music 2. Full song list 3. Option → Search . Hassle to go through the “option” stage to search for songs

Directions for Improvement

Need to add a search menu on the full song list view

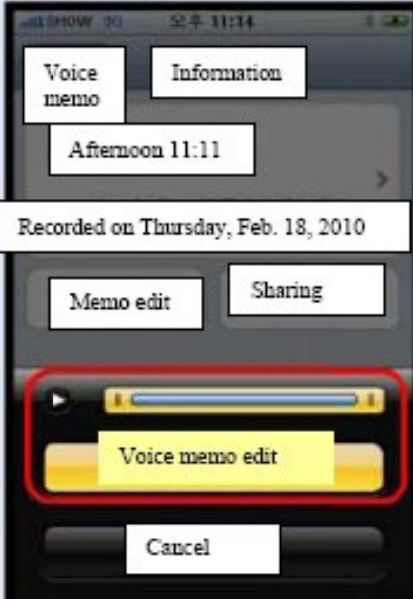
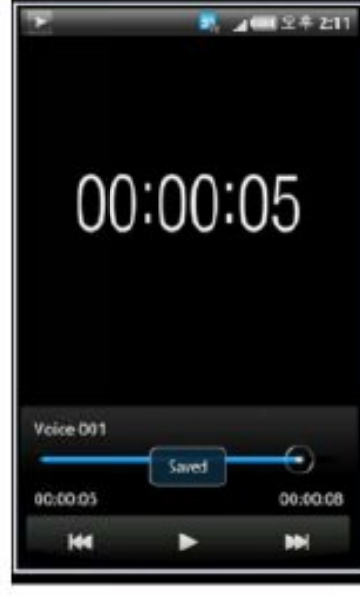
Translation

Confidential

101. Multimedia _ Voice Record

□ Does not provide editing function for voice memos

- i-Phone: Provides a function to cut out unnecessary parts from voice memo files
- S1 : Does not provide editing function for voice memo files

i-Phone		S1	
	<ul style="list-style-type: none"> ▪ Execution Method <ol style="list-style-type: none"> 1. Voice memo 2. File list 3. Option 4. Edit memo ▪ Expected effects <ul style="list-style-type: none"> . Possible to delete unnecessary parts from the recorded content 		<ul style="list-style-type: none"> ▪ Does not provide editing function. <ul style="list-style-type: none"> . Impossible to delete unnecessary parts

Directions for Improvement



Need editing function for voice memos

Translation

Confidential

102. Multimedia _ Video Player

- **When fast-forwarding/rewinding during video playback, cannot display the scene of current location**
 - **i-Phone:** During fast-forwarding/rewinding, shows the scene of then current location (useful for location search)
 - **S1:** The screen pauses at the stopping point, and only the scroll bar moves

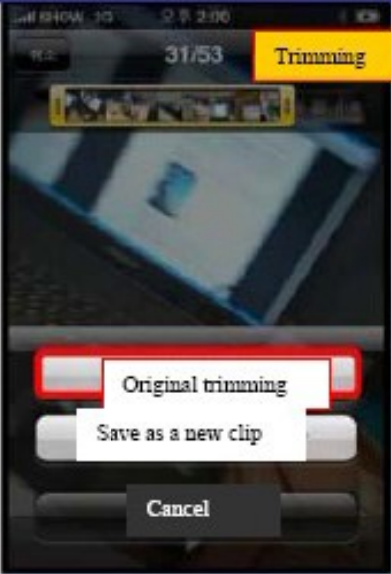

i-Phone		S1	
	<ul style="list-style-type: none"> ▪ Execution Method <ol style="list-style-type: none"> 1. During video playback 2. While holding down play bar 3. Adjust horizontal location ▪ Screen status during fast-forwarding/rewinding <ul style="list-style-type: none"> . Screen shows scene changes during scrolling, so it is easy to determine the location the user intends to go to 		<ul style="list-style-type: none"> ▪ Screen status during fast-forwarding/rewinding <ul style="list-style-type: none"> . Start screen maintained and only the scroll bar moves during Fast-forward / rewind
<p>Directions for Improvement</p>	<p>Need to modify so that the scene corresponding to the applicable location during fast-forward/rewind is shown to the user</p>		

Translation

Confidential

103. Multimedia _ Video Player

- **Does not provide a function for editing (trimming) video files from the video player**
 - **i-Phone:** Video files can be edited directly from the video player (possible to delete unnecessary parts)
 - **S1** : Not provided in video player, function provided in a separate video editor

i-Phone		S1	
	<ul style="list-style-type: none"> ▪ Method of Execution <ol style="list-style-type: none"> 1. Photograph 2. Play video file 3. Move frame bar horizontally 4. Select Trimming ▪ Expected effects <ul style="list-style-type: none"> . Possible to delete unnecessary parts from the video file content 		<ul style="list-style-type: none"> ▪ Supports a separate App <ul style="list-style-type: none"> . Video editor App . Compared to i-Phone, functionality is stronger (image/TXT added) . But, falls short on accessibility compared to the video player

Directions for Improvement

Need to modify so that the editing function is provided in the Video Player and is easy for common users to access

Translation

Confidential

104. Multimedia _ Video Player

□ Only indicates the video file last played from the video playlist

- **i-Phone:** Remembers the status (stop, pause) of all video files that were played from the video playlist.
- **S1** : Shows user only the most recently played file (no distinction of stop, pause)

i-Phone		S1	
	<ul style="list-style-type: none"> ▪ Execution Method 1. Go into Video List ▪ Displays status of executed files with icons ▪ Status icon <ul style="list-style-type: none"> • ● → Stop • ◐ → Pause • 🔊 → Recently executed file 		<ul style="list-style-type: none"> ▪ Execution Method 1. Go into Video List ▪ Indicates only the most recently played file

Directions for Improvement

Need to add a function indicating the status of the file from the video playlist



Translation

Confidential

105. Multimedia _ Camera

□ Perceived speed when entering Camera mode is slow.

- i-Phone: When entering Camera mode, the effect of lens screen closing/opening replaces the perceived time passage
- S1: Simple screen transitions are shown until Preview stage is reached.

i-Phone			S1
	<ul style="list-style-type: none"> ▪ Execution Method <ul style="list-style-type: none"> ⌚ Camera execution ⌚ Enter Preview ▪ Offset user's perceived time passage with the dynamic UI of the camera lens 		<ul style="list-style-type: none"> ▪ Slow perceived speed due to the simple screen conversion at the preview stage ▪ Actual entry speed is superior <ul style="list-style-type: none"> • S1 : 0.9s • iPhone : 2.9s

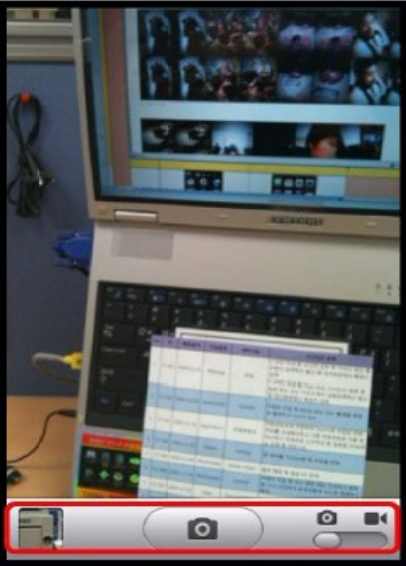

Directions for Improvement

Need a dynamic UI for entering the Camera mode

106. Multimedia _ Camera

❑ Camera function icons are not intuitive

- i-Phone : Picture taking and mode switching icons are intuitive
- S1 : Supports various functions, but falls short in intuitiveness and recognizability.


i-Phone	S1
 <ul style="list-style-type: none"> - Easy to recognize the switch between camera and camcorder - At the moment a picture is taken, it is displayed as a thumbnail on the lower right corner along with animation effects 	 <ul style="list-style-type: none"> - Difficult to recognize the 'switch' icon between camera and camcorder - Cannot check directly from the picture taking screen, and must press Play icon at the lower right corner to enter and view the picture.
<p>Directions for Improvement</p> <p>Need to modify icons for mode switch and Quick view</p>	

Translation
Confidential

107. Multimedia _ Album

Picture copying function not supported.

- i-Phone : Has picture copying function
- S1 : Function not supported

i-Phone	S1	
 <p>- After copying picture, copied picture can be pasted easily when composing a(n) email/MMS</p>		<p>- Function not supported</p>
<p>Directions for Improvement</p>	<p>Review picture copying function</p>	


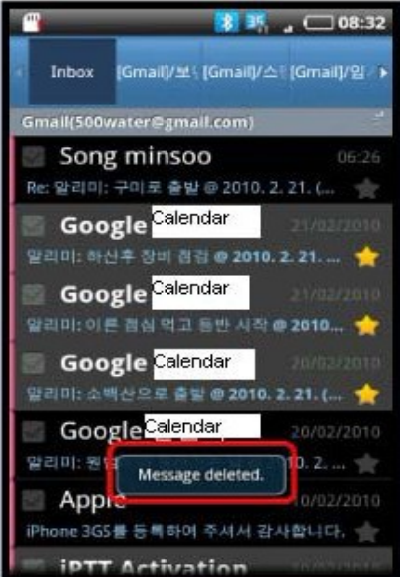
Translation

Confidential

108. Visual Interaction Effect _ Email

☐ No visual effects when moving e-mails to folders

- i-Phone : When a folder is selected, animation of mail icon flying into the folder is shown
- S1 : There is no moving menu when moving a mail; a pop-up appears when deleting (moving to trash)

i-Phone	GT-i9000(S1)
 <p>When email is selected and moved to a folder, fun factor is created by the animation of envelope icon flying from the initially stored folder to the destination folder</p>	 <p>When email is deleted (moved to trash), there is no visual effect at all and only the pop-up message of 'Message deleted' is shown</p>
<p>Directions for Improvement</p>	<p>Need to provide dynamic effects to highlight the fun factor to user</p>

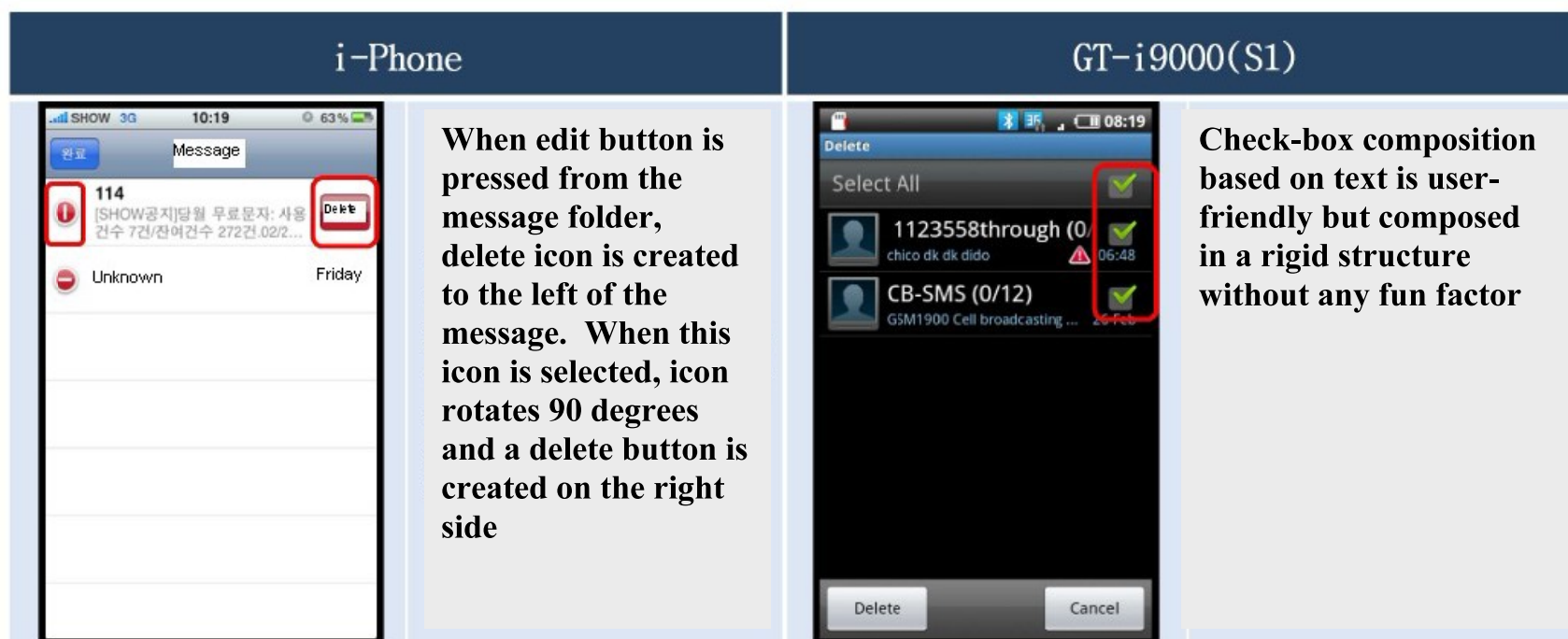
Translation

Confidential

109. Visual Interaction Effect _ Message

❑ No animation effect when deleting messages

- i-Phone : When deleting a message from folder, an icon is created and rotates when selected, providing fun factor
- S1 : Fun factor lacking because structured in the same existing check box format



Directions for Improvement

Need to develop UX that can deliver not only functional operations but also fun factor

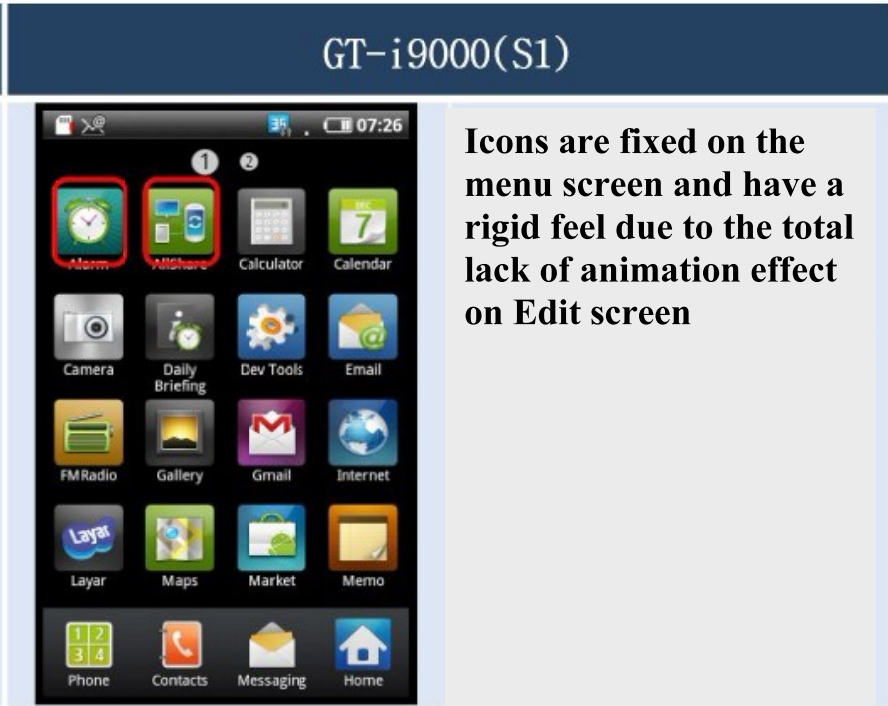
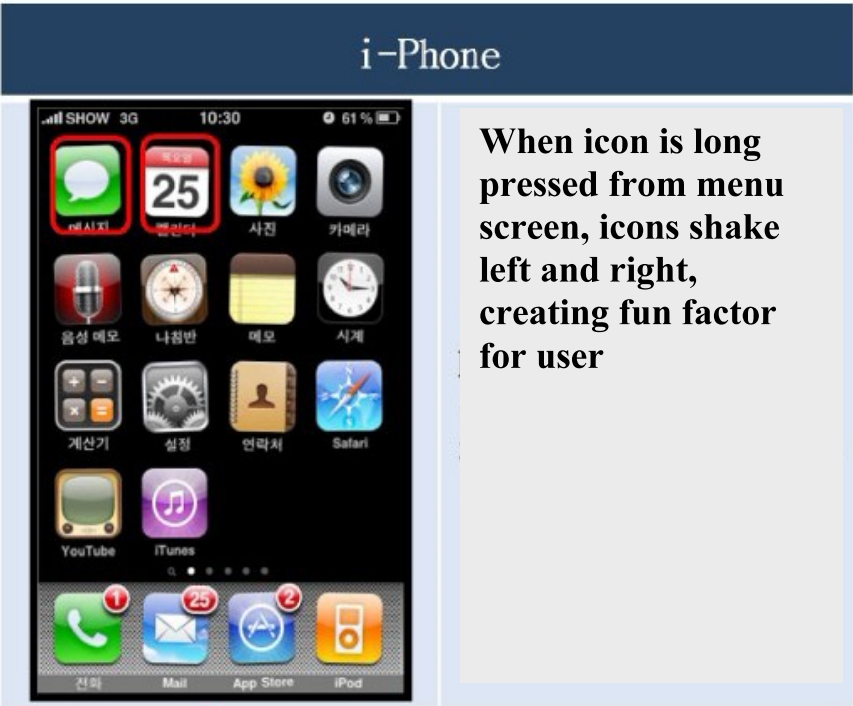
Translation

Confidential

110. Visual Interaction Effect _ Icon

□ When editing menu icons, no visual effects at all

- i-Phone : Inserted the effect of all icons shaking left and right when an icon is long-pressed
- S1 : No effect when icon is deleted or moved



Directions for Improvement

Need to develop UX that can deliver not only functional operations but also fun factor


Translation

Confidential

111. Visual Interaction Effect _ Maps

❑ No visual effect when entering Options from Maps application

- I-Phone : Page flipping effect displayed when option key is pressed from Maps App
- S1 : Does not support the iphone-like animation on Navigation App

i-Phone	GT-i9000(S1)
 <p>When option menu in lower right corner is pressed after launching the Maps app, shows animation effect of a page flipping over, providing fun factor to the user</p>	 <p>After running Navigation App, no page flipping animation is shown when entering the More option menu, making it rigid and less fun</p>
<p>Directions for Improvement</p>	<p>Need to develop UX that can deliver to user not only functional operations but also fun factor</p>


Translation

Confidential

112. Visual Interaction Effect _ Maps

□ No animation effect when designating PIN from Maps application

- i-Phone : Added animation showing pin dropping from the upper screen and hitting the ground when it is designated
- S1 : Animation not supported

i-Phone	GT-i9000(S1)
	<p>After launching Maps App, when PIN drop from Option is selected, animation of pin dropping from the upper screen and hitting the ground is shown, making it fun for the user</p>
<p>Directions for Improvement</p>	<p>Animation not supported</p> <p>Need to develop UX that can deliver not only functional operations but also fun factor</p>



Translation

Confidential

113. Visual Interaction Effect _ Camera

❑ Lacks effect when entering the camera shooting screen, and after taking photographs

- i-Phone : Provides dynamic feel to the user by displaying effects when entering shooting screen and after taking photos
- S1 : Simple entry and lacks a feeling of completion after shooting as the screen immediately returns to Preview

i-Phone	GT-i9000
 <ul style="list-style-type: none"> ▪Offsets user's perceived time passage through dynamic UI of the camera lens ▪After the photo is taken, effect resembling photo being saved in an album signals to user that the action is complete 	 <ul style="list-style-type: none"> ▪Perceived speed is slow due to simple screen transition from the preview stage ▪Returns to preview screen immediately after photo is taken, so difficult to know if it saved properly
<p>Directions for Improvement</p>	<p>Need to modify so that camera preview appears smoothly and to clearly give feedback to the user that saving is completed after taking a photo</p>

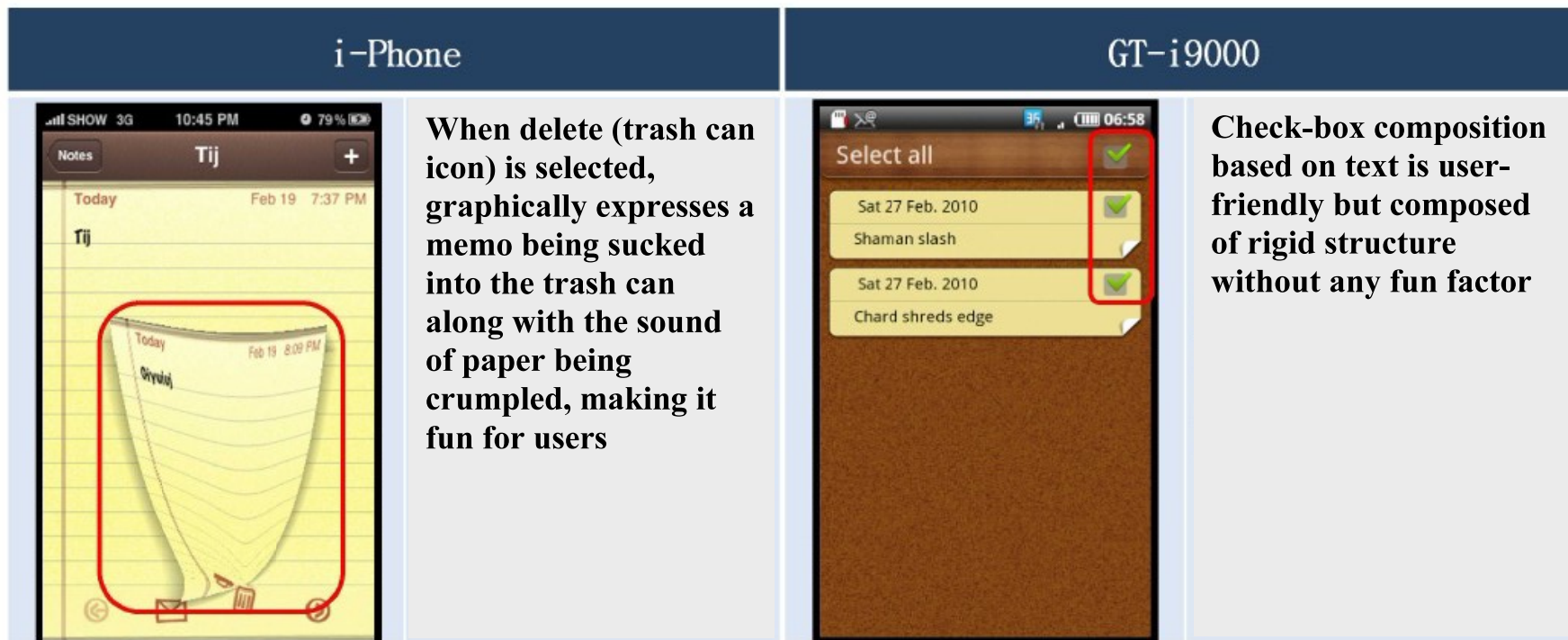
Translation

Confidential

114. Visual Interaction Effect _ Memo

❑ When deleting a memo, lacks fun factor compared to i-phone

- i-Phone : When deleting memo, creates fun factor for users by displaying an animation of memo being sucked into the trash can
- S1 : Composed of check box structure identical to the existing format, so lacks fun factor



Directions for Improvement

Need to develop UX that can deliver not only functional operations but also fun factor

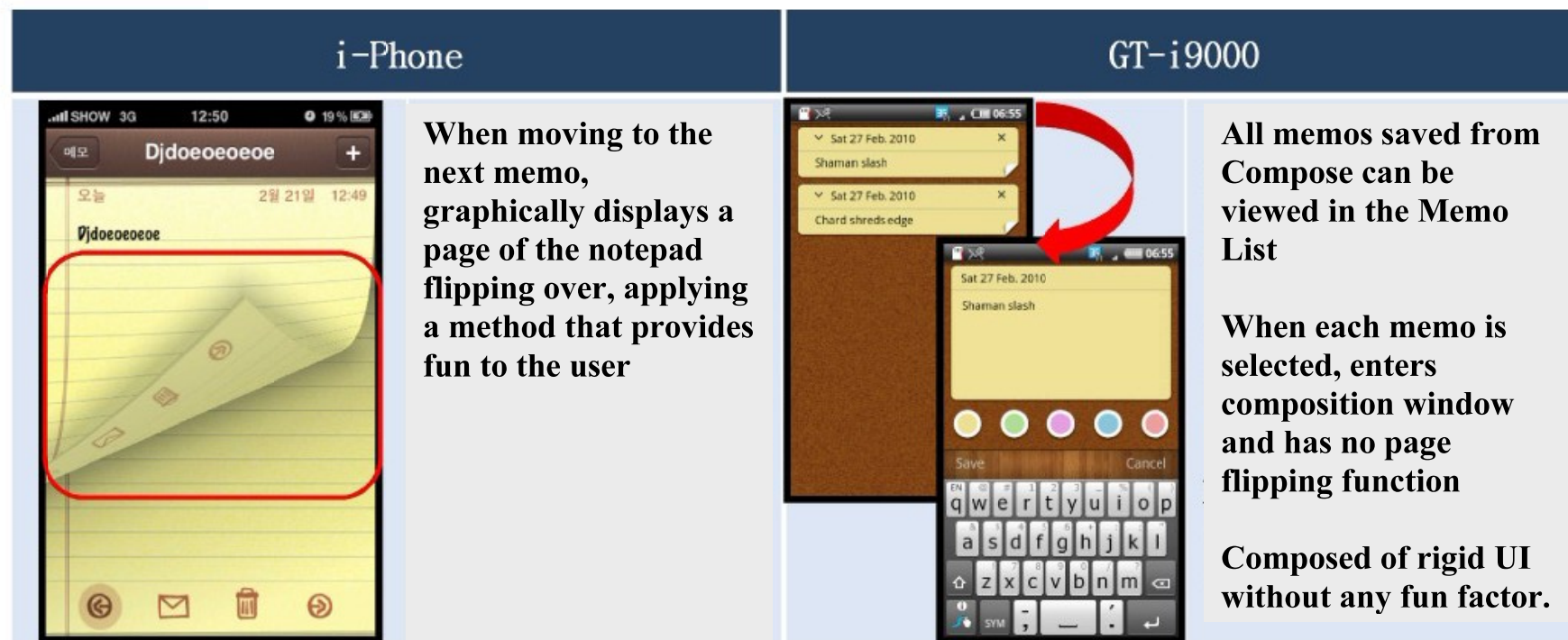
Translation

Confidential

115. Visual Interaction Effect _ Memo

□ When flipping over the memo page, lacks fun factor compared to i-phone

- i-Phone : When turning over the memo, displays an animation of a page flipping over, generating fun for the users
- S1 : Can view saved memos from memo list, but page flipping function not supported



Directions for Improvement

Need to develop UX that can deliver not only functional operations but also fun factor



Translation

Confidential

116. Visual Interaction Effect_Attaching Photos

□ When composing e-mail, picture attachment effect is lacking compared to i-Phone

- i-Phone : Effect of picture actually going on top of the email and being attached to it is fun
- S1 : Attached file is displayed in an icon format without any effect

i-Phone	GT-i9000
 <p data-bbox="636 648 961 976">After picture is viewed and attached to an E-Mail, an effect shows picture actually being attached to E-Mail, making it fun for user</p>	 <p data-bbox="1514 648 1839 724">Picture is attached without any effects.</p>
<p data-bbox="195 1253 359 1307">Directions for Improvement</p> <p data-bbox="396 1219 1388 1256">Need to develop dynamic effects to bring out fun factor to user</p>	

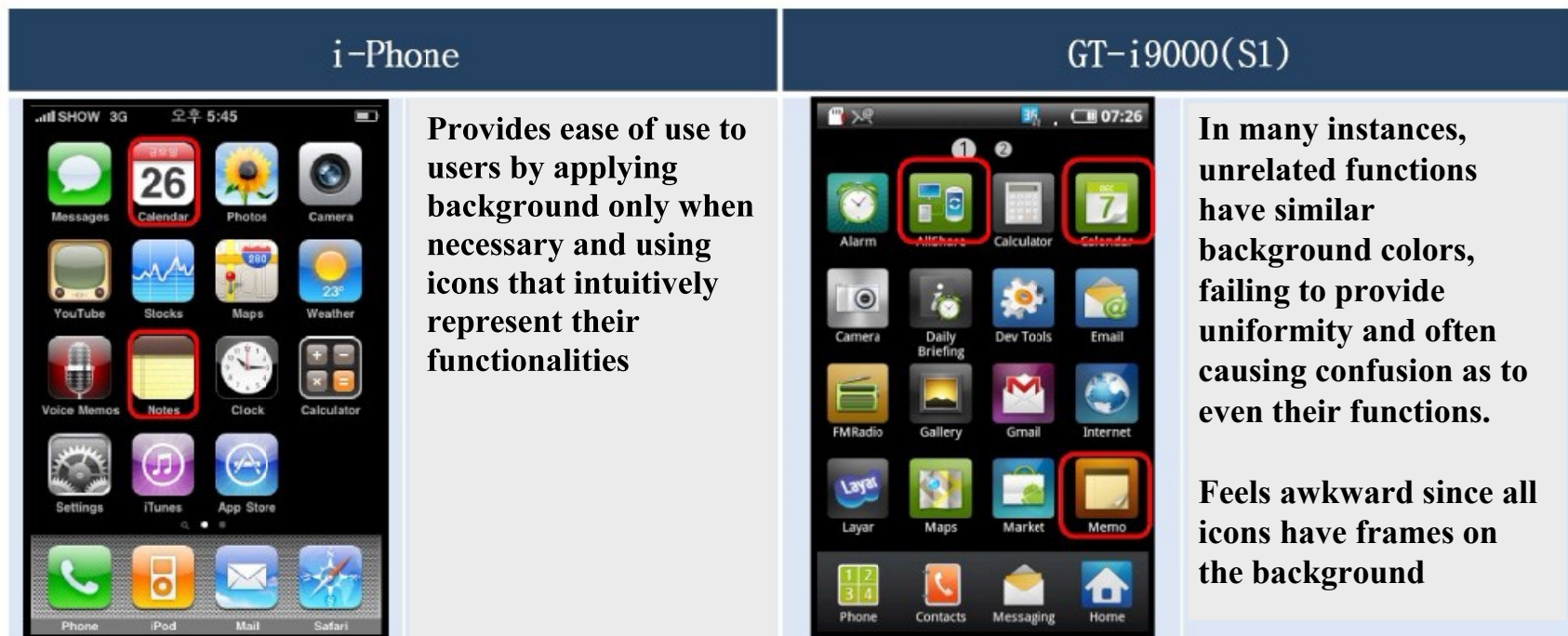
Translation

Confidential

117. Visual Interaction Effect _ Icon

□ Poor color arrangement of rectangular frames on the homescreen that form the backgrounds for icons

- i-Phone : Icons on home screen have high intuitiveness because a background is used only when necessary
- S1 : Many instances where icons have similar background colors even though they do not have similar functions



Directions for Improvement



Either change the colors of bordering rectangular frames according to a consistent pattern for a uniform feel, or remove the rectangular frame and use the icons only for a clean and uniform feel

118. Visual Interaction Effect _ Music player

Translation
Confidential

Animation effects on the MP3 Play screen are inferior compared to iPhone

- i-Phone : If MP3 album is selected during iPod play, introduces an animation of album spinning around and showing song titles in the back
- S1 : Plain animation of album moving to the left and song titles appearing on the right when selected

i-Phone	GT-i9000
 <p>When switching the screen to Landscape mode while playing MP3 with iPod, the number of all tracks currently stored in the album is displayed. When album is selected, it spins and the title of the song is displayed on the back. The spinning seems natural and provides fun to users</p>	 <p>When an album is selected from Landscape mode while MP3 is playing, album moves horizontally, and the title of the song is displayed at the bottom.</p> <p>Animation is plain, difficult for users to have interest</p>

Directions for Improvement

Need to develop UX that can deliver not only functional operations but also fun factor



Translation

Confidential

119. Visual Interaction Effect _ Alarm

□ When changing the set time for the alarm, speed is the same throughout, making it inconvenient

- i-Phone : When setting time, if wheel is spun quickly, it spins quickly at first then slows to a stop
- S1 : Inconvenient because of the flip pad method, only changes at a uniformly slow speed

i-Phone	GT-i9000
 <p>The screenshot shows the 'Add Alarm' screen on an iPhone. At the bottom, there is a time wheel with a red circle around it. The wheel has columns for AM/PM (오전/오후) and hours (1-5) and minutes (34-37).</p>	<p>Spinning speed responds according to user's touch speed. To enhance accuracy for the user, gives the effect like it is slowing down by friction as times passes, providing fun factor to users</p>
 <p>The screenshot shows the 'Alarm time' screen on a GT-i9000. It features a flip pad with a red circle around it. The pad shows the time 15:44 and has buttons for '+', '-', '3', '44', and 'PM'.</p>	<p>Even if pressed down for a long time, always changes at a uniform speed, so not only inconvenient but also boring to users</p>

Develop speed and accuracy that can immediately provide the response the users demand

Directions for Improvement



Translation

Confidential

120. Visual Interaction Effect _ Alarm

□ When setting time for alarm, emotional satisfaction is low due to monotonous sound effects

- i-Phone : Sound effect like winding the back of an old clock
- S1 : Dry sound effect of a simple mechanical sound

i-Phone	GT-i9000
	<p>When user drags to set time, makes a clock winding sound, stimulating user's sense of nostalgia and emotions</p>
	<p>Due to simple mechanical sound, feels dry and has low emotional satisfaction</p>
<p>Directions for Improvement</p>	<p>Add sound effects that stimulate user's sense of nostalgia and emotions</p>



121. Visual Interaction Effect_Voice Recording

Translation

Confidential

❑ No feedback on sound level when recording voice

- i-Phone : When using voice recorder, provides image of a microphone and displays volume
- S1 : Provides recorder as a background and does not display sound recording status (level)

i-Phone	GT-i9000
	<p>Because users speak into a microphone when actually recording something, it gives users a familiar recognition that easily shows what function is being used and what action needs to be taken</p> <p>Provides feedback on the sound level detected from microphone</p>
	<p>A recorder is not a bad background, but users are not familiar with the recorder and microphone is what is actually touched during recordings, so falls short on intuitiveness in comparison</p> <p>No feedback on the sound level of what is being recorded</p>

Directions for Improvement

Select a background that gives an emotional and intuitive feel to the user when using the function
Add feedback that indicates the volume of what is being said at the time

對外秘

122. Visual Interaction Effect _ Icon

- 다른 기능에 대해 유사 모양의 아이콘 채용으로 구분이 용이하지 않음
 - i-Phone : 직관성이 높은 아이콘을 사용해 한눈에 알아보기 쉬움
 - S1 : 중복되거나 직관성이 떨어지는 아이콘이 있어 구분이 용이하지 않음





개선 방향 겹치는 아이콘을 변경하고 직관성이 높은 아이콘을 선별하여 사용
 명칭이 긴 어플의 경우 긴 명칭을 간단하게 바꾸거나 긴 명칭을 한번에 표현 가능하도록 바꿔 이해가 쉽도록 함

Translation

Confidential

123. Visual Interaction Effect _ Keypad

- ❑ **No visual effect for keypad operation during calls**
 - i-Phone : When keypad is tapped, rotation effect is displayed during screen transition
 - S1 : No animation effect during the screen transition for dial pad pop-up

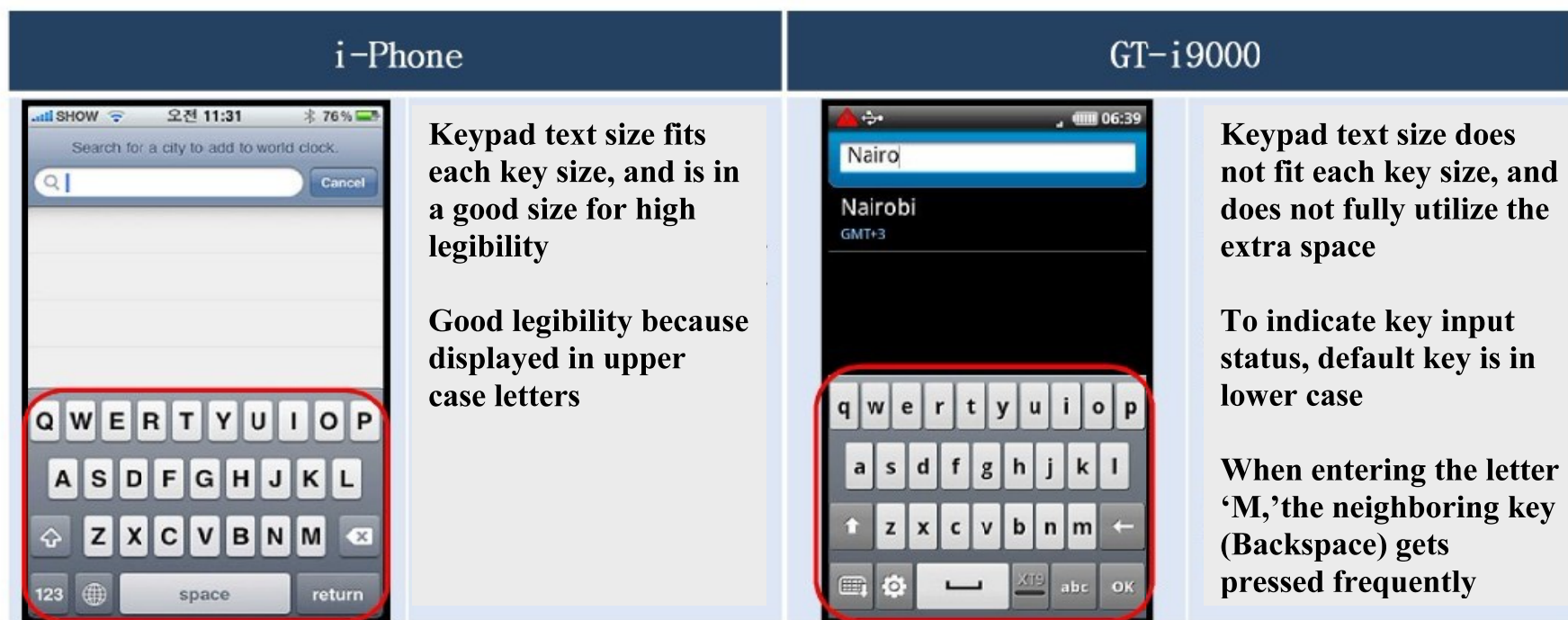
i-Phone	GT-i9000
	
<p>Screen rotates during transition when Keypad or Hide Keypad is tapped during calls</p>	<p>Screen switches without effects</p>
<p>Directions for Improvement</p>	<p>Add screen transition effects such as rotation/fly-in when operating each kind of option menu</p>

Translation

Confidential

124. Visual Interaction Effect _ Keypad

- ❑ **Difficult to read because default key input mode is lower case and small in size**
 - i-Phone : Legibility is good because keypad text size is large and displayed in upper case letters
 - S1 : Legibility is poor because keypad text size is small and displayed in lower case letters



Directions for Improvement

Need to review enlarging the key pad text sizes to increase legibility, minimizing interference between neighboring keys and changing default text to upper case letters

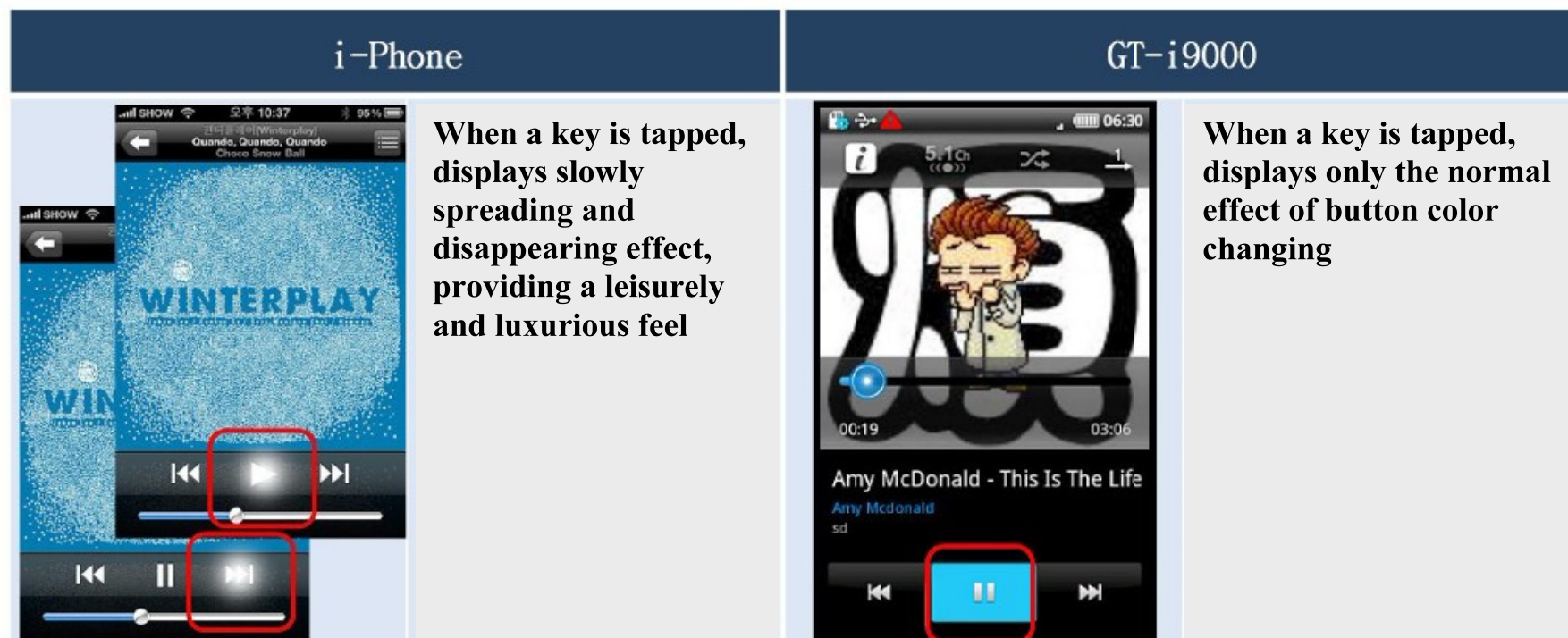
Translation

Confidential

125. Visual Interaction Effect _ Icon

□ Visual effect is normal when media playback related keys are pressed

- i-Phone : When a key is tapped, the effect of slow spreading white color makes it luxurious
- S1 : When a key is tapped, the entire button box changes color to indicate the pressed state



Directions for Improvement

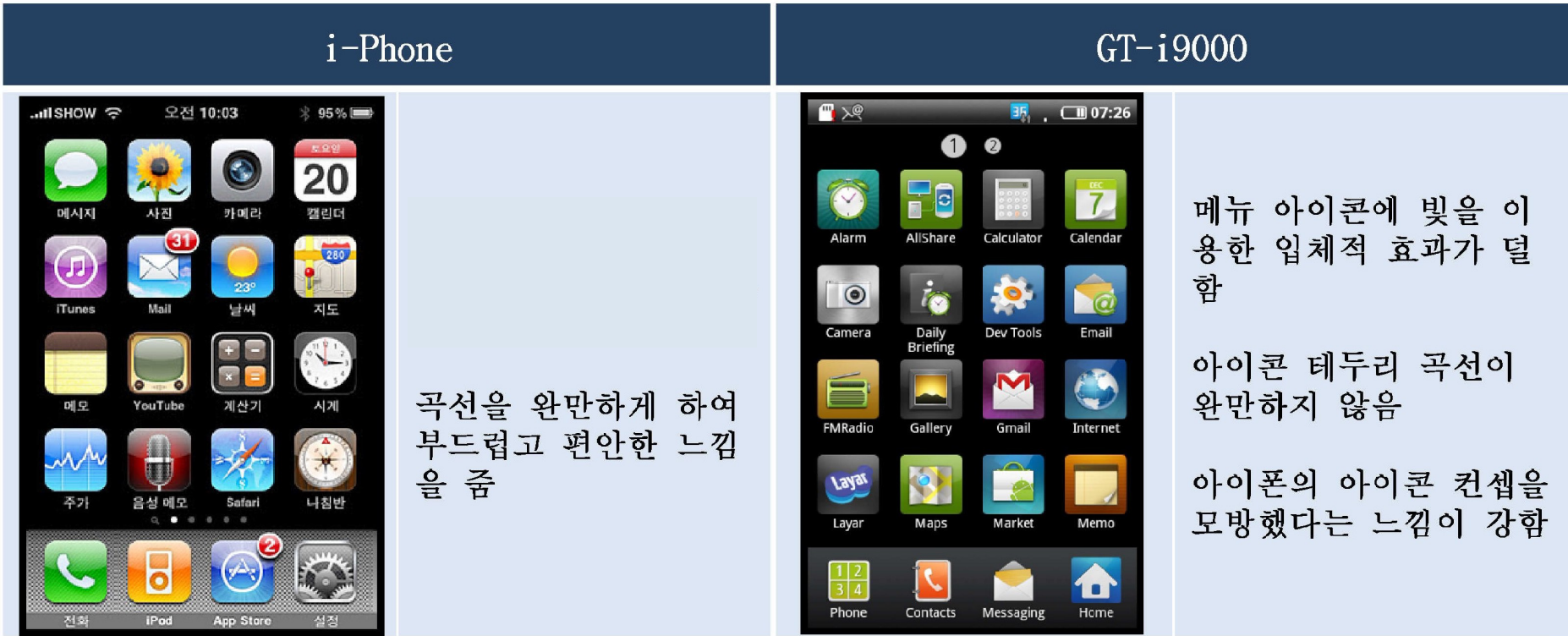
Add a luxurious feel by providing effects when clicked state of the icons are changed

對外秘

126. Visual Interaction Effect _ Icon

□ 메뉴 아이콘의 Graphical UI가 단조로움

- i-Phone : 빛을 이용한 입체적 효과 극대화, 아이콘 테두리 곡선이 완만
- S1 : 빛을 받는 느낌 없고 아이콘 모서리 곡선의 부드러운 느낌이 덜함



빛의 효과를 넣어 아이콘을 좀 더 부드럽고 고급스럽게 구현 할 것
 모서리 곡선을 보다 완만하게 하여 딱딱한 느낌을 없앨 것
 디자인의 차별화로 아이폰의 메뉴 아이콘을 모방했다는 느낌을 없앨 것

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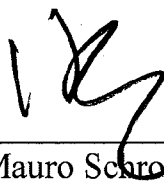
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Certificate of Translation

10 May 2012

I hereby certify that this Korean to English translation of pages SAMNDCA00203880 to SAMNDCA00204010 of the document with the beginning Bates number SAMNDCA00203880 is an accurate and complete rendering of the contents of the source document to the best of my knowledge, except for the word "TRANSLATION" at the upper right corner of each translated page. I further certify that I am competent in both languages and have twenty years of professional experience in Korean to English translation.

By: _____



Peter Mauro Schroepfer