an example of screen transition of a paper selection screen in a case where a "display by paper size group" mode is set according to the third embodiment.

[0035] Figure 22 depicts a view for illustrating an example of screen transition of a paper selection screen in a case where a "consider different paper types" mode is set according to the third embodiment.

[0036] Figure 23 depicts a view for illustrating an example of screen transition of a paper selection screen in a case where a "consider other paper sizes" mode is set according to the third embodiment.

[0037] Figures 24A and 24B are flowcharts for describing a copy processing procedure in the image forming apparatus according to the third embodiment.

[0038] Figures 25A through 25E are views for illustrating examples of display management tables according to the third embodiment.

DESCRIPTION OF THE EMBODIMENTS

[0039] Embodiments of the present invention will be described hereinafter in detail, with reference to the accompanying drawings. It is to be understood that the following embodiments are not intended to limit the claims of the present invention, and that not all of the combinations of the aspects that are described according to the following embodiments are necessarily required with respect to the means to solve the

selected, and returns to the copy base screen 910. In the paper selection screen 912, it can be seen that the amount of paper in the paper feed deck 314 having paper feed deck ID "9" has increased from when the copy base screen 910 is displayed.

[0067] Figure 10 depicts a view for illustrating an example of screen transition of the paper selection screen displayed in a case where paper runs out during printing in the first embodiment.

[0068] In a copy base screen 1010, a mode in which paper feeding is designated to be from the paper feed deck 314 having the paper feed deck ID "9" is set. When the CPU 401 detects that the start key 503 of the console unit 303 is pressed in this state, it starts print processing and displays a currently executing dialogue as shown in a screen 1011.

[0069] In a case where an out of paper error occurred here during printing, the CPU 401 determines the paper feed deck that ran out of paper, calculates the number of display pages of the paper selection screen, and displays the paper selection screen 1012. Because in the paper selection screen 1012, paper ran out in paper feed deck 314 having paper feed deck ID "9", the second page paper selection screen including paper feed deck information of the paper feed deck 314 is displayed, a line 1001 corresponding to the paper feed deck "9" is invertedly displayed, and an icon indicating that

paper run out error occurs here, the CPU 401 specifies a second candidate paper feed deck, calculates a number of display pages of the paper selection screen and displays a paper selection screen 1112. In the paper selection screen 1112, the paper feed deck 315 having the paper feed deck ID "10" is selected as the second candidate paper feed deck with which recovery from the error is possible. Thus, a second page paper selection screen including paper feed deck information of the paper feed deck 315 is displayed, and a line 1101 corresponding to the paper feed deck ID "10" and an "automatic paper selection" key 1102 are invertedly displayed. When the CPU 401 detects that an "OK" button 1103 is pressed in this state, it closes the paper selection screen 1112 and displays a print processing using A3 size and THICK PAPER 1 of the paper feed deck ID "10" currently executing dialogue as shown in a screen 1113. When the CPU 401 detects that print processing completed in the state of the screen 1113, it closes the currently executing dialogue and returns to the copy base screen 1110.

[0074] Next, explanation for characteristic processing procedure in the image forming apparatus 302 of the first embodiment is given referring to the flowcharts of Figures 12A and 12B and Figures 13A and 13B.

[0075] Figures 12A and 12B are flowcharts for

shown in Fig. 18A.

[0111] Figures 18A through 18D depict views for illustrating examples of display management tables for managing display priority of paper feed decks displayed on the paper selection screen according to the second embodiment. In Figures 18A through 18D, paper size and paper type are recited, but in actually display priority and paper feed deck ID information is registered in the display management table. Note, this display management table information is stored in the RAM 402 by the CPU 401.

[0112] For example, Figure 18A is showing the display management table for when "tab paper print" mode is designated. Here, information of paper feed decks having paper feed deck IDs "3" and "7" which contain tab paper that can be used in "tab paper print" mode are highly prioritized, and the selected paper feed deck ID "3" is the paper feed deck of the highest priority. With this, the paper selection screen 1412 of Figure 14 is displayed.

[0113] Also, Figure 18B shows the display management table for when "front cover" mode is designated. Here, information of paper feed decks having paper feed deck IDs "1", "4","9" and "10" which contain thick paper that can be used in "front cover" mode are highly prioritized, and the selected paper feed deck ID "1" is the paper feed deck of the highest

"display by paper size group" key 1903, a "display by paper type group" key 1904, a "consider different paper sizes" key 1905 and a "consider different paper types" key 1906. Also, in the setting/registration screen 1911, as a default display method of the paper selection screen, as shown in the paper selection screens 711 and 712 of Figure 7 for example, the "no setting" key 1902 is invertedly displayed so the control is performed for displaying paper feed deck IDs "1" through "10".

[0127] In the setting/registration screen 1911, when the user after selecting one of the keys out of numerals 1902 through 1906, and pressing an "OK" key 1907 in the bottom right of the screen, the CPU 401 stores the selected setting in the HDD 404. With this, it is possible to later switch the default display method of the paper selection screen. When the CPU 401 detects that a "cancel" key 1901 or the "OK" key 1907 is pressed on the setting/registration screen 1911, the setting/registration screen 1911 is closed.

[0128] Figure 20 depicts a view for illustrating an example of screen transition of the paper selection screen in a case where a "display by paper type group" mode is set using the "display by paper type group" key 1904 according to the third embodiment.

[0129] In a copy base screen 2010, an automatic paper selection mode is set. When the CPU 401 detects

that a "paper selection" key 2001 is pressed in the copy base screen 2010, it displays a paper selection screen 2011 (first page). In the paper selection screen 2011, detailed information of paper feed decks registered in the paper feed deck management table is displayed in list format in paper feed deck ID order "5"->"2"->"1"->"10"->"4" in order to show classification into thin paper, plain paper, thick paper, tab paper and OHP groups. When the CPU 401 detects that a page forward key 2003 is pressed in the paper selection screen 2011, it displays a paper selection screen 2012 (second page).

[0130] In the paper selection screen 2012, classification into thin paper, plain paper, thick paper, tab paper and OHP groups is shown, and detailed information of paper feed decks is displayed in list format in paper feed deck ID order "9"->"7"->"3"->"6"->"8" continuing from the paper selection screen 2011. When the CPU 401 detects that a page back key 2004 is pressed in the paper selection screen 2012, it displays the paper selection screen 2011 (first page). When the CPU 401 detects that an "OK" key 2005 is pressed in paper selection screen 2011 or 2012, the paper selection screen is closed and the copy base screen 2010 is returned to.

[0131] In this way, when "display by paper type group" mode is set, a paper feed deck information list

is displayed in a format organized by type of the contained paper.

[0132] Figure 21 depicts a view for illustrating an example of screen transition of the paper selection screen in a case where a "display by paper size group" mode is set using the "display by paper size group" key 1903 according to the third embodiment.

[0133] In a copy base screen 2110, an automatic paper selection mode is set. When the CPU 401 detects that a "paper selection" key 2101 is pressed in the copy base screen 2110, it displays a paper selection screen 2111 (first page). In the paper selection screen 2111, detailed information of paper feed decks registered in the paper feed deck management table is displayed in list format in paper feed deck ID order "2"->"5"->"9"->"7"->"8" in order to show classification into B5, A4, LTR, B4 and A3 paper size groups. When the CPU 401 detects that a page forward key 2103 is pressed in the paper selection screen 2111, it displays a paper selection screen 2112 (second page).

[0134] In the paper selection screen 2112, classification into B5, A4, LTR, B4 and A3 paper size groups is shown, and detailed information of paper feed decks is displayed in list format in paper feed deck ID order "3"->"6"->"1"->"4"->"10" continuing from the paper selection screen 2111. When the CPU 401 detects that a page back key 2104 is pressed in the paper

selection screen 2111 of Figure 21 to be displayed on the console unit 303 via the console unit I/F 406. Next the processing proceeds to step S2418, and the CPU 401 determines whether or not the page forward key of the paper selection screen is pressed. If it is determined in step S2418 that the page forward key of the paper selection screen is pressed, the processing proceeds to step S2420, and the CPU 401 determines whether or not the display page number N is smaller than the maximum page number MAX. In a case where it is determined in step S2420 that the display page number N is smaller than the maximum page number MAX, the processing proceeds on to step S2421 and the CPU 401 advances the processing on to step S2417 with the page display number N being a page number obtained by adding 1 to N. On the other hand, in a case where it is determined in step S2420 that the display page number N is not smaller than the maximum page number MAX, the CPU 401 advances the processing on to step S2417 without changing the display page.

[0158] Also, in a case where in step S2418 it is determined that the page forward key of the paper selection screen is has not been pressed, the processing proceeds on to step S2419 and the CPU 401 determines whether or not the page back key of the paper selection screen is pressed. In a case where it is determined in step S2419 that the page back key of

WHAT IS CLAIMED IS:

1. An image forming apparatus having a plurality of paper feed units (306-315); the apparatus comprising:

display means (501) for displaying a paper selection screen including a selection list for providing a user with information of a part of the plurality of paper feed units, wherein the user being capable of selecting a sheet to be used in printing via the paper selection screen; and

specification means for specifying a paper feed unit in which a paper running out is occurred among the plurality of the paper feed units, (S1304 in Fig. 13)

wherein said display means displays the paper selection screen in which a selection list including information of the paper feed unit specified by said specification means is firstly displayed. (Fig. 10)

2. An apparatus according to claim 1, wherein said display means further displays an object (703 in Fig. 7) for changing the information of a part of the plurality of paper feed units into information of another paper feed unit in the paper selection screen. ([0058])

3. An apparatus according to claim 1 or 2, wherein said display means displays the paper selection screen in which information of the paper feed unit in which

the paper running out is occurred is highlighted. (Fig. 10)

4. An apparatus according to any one of claims 1 to 3, wherein the selection list provides information related to a sheet set to each of the plurality of paper feed units.

5. An apparatus according to claim 4, wherein the information related to a sheet includes a size of the sheet and a type of the sheet.

6. An apparatus according to claim 5, wherein the information related to a sheet further includes a grammage of the sheet.

7. A method of controlling an image forming apparatus having a plurality of paper feed units, the method comprising:

a display step of displaying a paper selection screen including a selection list for providing a user with information of a part of the plurality of paper feed units, wherein the user being capable of selecting a sheet to be used in printing via the paper selection screen; and

a specification step of specifying a paper feed unit in which a paper running out is occurred among the

plurality of the paper feed units,

wherein said display step displays the paper selection screen in which a selection list including information of the paper feed unit specified in said specification step is firstly displayed.

8. A program for causing a computer to execute the method of controlling an image forming apparatus according to claim 7.