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MacX: Client Crash Due to Default Color Map

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TOPIC -----

I'm using MacX and the Khoros image manipulation package from the University of New Mexico. Using the Khoros editimage program, the client windows appear on the screen just fine, but when I attempt to open an image, the client crashes with the following message:

```
X Error of failed request: BadValue (integer parameter out of range for
operation)
Major opcode of failed request: 89 (X_StoreColors)
Value in failed request: 0x100
Serial number of failed request: 3859
Current serial number in output stream: 3861
Major X error encountered for display '128.36.2.15:0.2'! Unable to recover.
```

```
[1] Exit 1 editimage
```

AND the MacX application crashes with either a bus error, a bad F-trap error, or an ID 12 error.

This behavior is 100% repeatable with those images that cause it. However, certain images will display reliably, with a 0% chance of causing the crash. The program seems to fail when the image contains more than about 200 different colors. (All the images are 8 bits deep, but some have smaller palettes, not using all 256 values.)

The Khoros putimage program, which is simpler (it only displays the image without allowing any manipulation), can reliably display all the images on the Macintosh screen. The editimage program has no problem displaying images on the Sun screen.

I'm using various Macintosh II-class computers (IIci, IIfx), which are all connected to LocalTalk. I'm running MacX 1.0.1, MacTCP 1.1, MacTCP Tool 1.0 and System 6.0.5. I tried the same thing on a Quadra 900 running System 7.0.1, MacX 1.1.7, MacTCP 1.1 and the MacTCP Tool 1.1 and experienced exactly the same behavior. So I don't believe a software upgrade will solve his problem. I make IP connections through a FastPath,

and the host is a Sun Sparcstation 1.

DISCUSSION -----

The problem described probably involves the MacX loading the "standard color maps" by default, since many X client applications use the STANDARD or default X color map. MacX uses the standard Macintosh system palette as the DEFAULT color map (it should). This allocates/locks about 128 colors, and leaves about 130 color map cells free for clients to write in that map. Therefore, if the application tries to allocate more than 130 colors in that color table, it fails. In other words, you CAN'T allocate more than 130 colors in the DEFAULT color map; you have to create a NEW color map and install your colors into it.

Applications that use the standard or default color map will cause this situation. Recently, MacX provided a patch for applications that don't create their own color maps and need a full 256 colors to work properly. The patch (using ResEdit) bypasses the standard color map initialization when MacX launches. Here are the patch instructions:

- 1) Back up golden master of MacX 1.1.7.
- 2) Open MacX 1.1.7 with ResEdit.
- 3) Double-click on the CODE resource icon.
- 4) Select ID #4.
- 5) At the offset 0x2952:
 - Change the 0x4E56 to 0x4E75,
 - Save the change and exit ResEdit.

This removes the standard color map initialization.
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