X16 Graphics Format Draft Specification (rev 5a)

This is a proposed specification for an Image file format that is specific to the Commander X16 platform.   It is not meant for general use on other platforms but tools will be provided on those Platforms (Linux/BSD/Windows/Mac) to convert standard file formats such as PNG & JPG to the X16 format.

GOALS
- A format optimized for the X16 that is easily programmed for
- Takes full advantage of all capabilities of the VERA video hardware.
- Portability for software developed for X16

INITIAL DRAFT SPECIFICATION (rev 5a.)

FILE ELEMENT	SIZE IN BYTES	PURPOSE	Comment
File ID (*char*)	3	To identify this file as an X16 Bitmap File	Always "**BMX**" *$42,$4D,$58*
Version (*byte*)	1	File format version	$01 when final
Bit Depth (*byte*)	1	What is the color depth of this image ?	1, 2, 4 or 8
VERA Color Depth Register (*byte*)	1	Corresponds to Color Depth	0, 1, 2 or 3 Should have a 1 to 1 correspondence to Bit Depth. (can be used as a sanity check also)
Width (*Word*) **Little Endian**	2		Image Width
Height (*Word*) **Little Endian**	2		Image Height
Pal_Used (*unsigned byte*)	1	Tells how many entries in the Palette are significant for this Image.	0 = 256 entries (or else how many)
Pal_Start (*unsigned byte*)	1	Palette Index on the X16 Where Pal Load should start	0-255
Data Start (word)	2	Offset in this file where the Image data starts	
COMPRESSED (signed byte)	1	Image uses LZSA compression	-1 if Image data is LZSA compressed
VERA Border Color (*unsigned byte*)	1	Self Explanatory	0-255 (Should be 0 if unused)
RESERVED	16	RESERVED FOR FUTURE USE	THIS MAKES THE HEADER 32 BYTES.
IMAGE PALETTE	Variable **2** x **Pal_Used**	Image desired colors	2 byte Entries with 12 significant bits **GB_R** arrangement.
IMAGE DATA	Variable	The Image Data to copy to Screen Memory (Taking into account Width and Height)	