CLAIMS:

1. A handheld device for processing a bar code image, comprising:

an optical sensor to sense an image of a bar code as a rectangular array of pixels, the presence of the full bar code in the image being automatically detected by the handheld device;

a lens coupled to the optical sensor to focus the image on the optical sensor;

at least one light projector to project at least one visual light image on a surface containing the bar code to aid a user in placing the handheld device at a correct distance from the bar code to focus the image on the optical sensor, wherein the at least one visual light image provides a visual indication which includes a projected image that appears in focus to the user of the handheld device only when the device is at the correct distance from the bar code;

an indicator to present an audible or visual indication to the user when the distance from the handheld device to the bar code is correct;

a storage element coupled to the optical sensor to store the image as values for the rectangular array of pixels; and

a processor coupled to the storage element, the processor to analyze the stored image to decode the bar code.

2. The handheld device of claim 1, further comprising a display to display the image of the bar code.

3. The handheld device of claim 2, wherein the processor is to display the bar code on the display.

4. The handheld device of claim 1, further comprising a radio coupled to the processor to wirelessly communicate a message representing the decoded bar code to another device.

~~5. The handheld device of claim 1, wherein the at least one image includes:~~

~~two beams of light that converge when the device is at the correct distance from the bar code;~~

~~two images that overlap when the device is at the correct distance from the bar code;~~ ~~or~~

~~a projected image, wherein the projected image appears in focus for the user only when the device is at the correct distance from the bar code.~~

~~5~~6. A method of processing a bar code, comprising:

sensing an image of the bar code including automatically detecting the presence of the full bar code in the image;

providing a focusing aid prior to taking a picture to enable a user to place a handheld camera at a correct focus distance from a bar code;

generating an audible or visual indication to the user when the distance from the handheld camera when the distance from the handheld camera to the bar code is correct;

taking a picture of the bar code with the handheld camera, the picture being retained as a stored image representing a rectangular array of pixels; and

analyzing the stored image using a processor to decode the bar code~~.~~;

wherein providing a focusing aid comprises projecting at least one visible light image onto a surface containing the bar code, wherein the at least one visible light image provides a visual indication which includes a projected image that appears in focus to the user only when the apparatus is at the correct distance from the bar code.

~~6~~7. The method of claim ~~5~~6, further comprising wirelessly transmitting information about the bar code from the handheld camera to another device.

~~7~~8. The method of claim ~~6~~7, further comprising receiving information from the other device about an object identified with the bar code.

~~9. The method of claim 6, wherein the at least one image includes:~~

~~two beams of light that converge when the handheld camera is at the correct distance from the bar code;~~

~~two images that overlap when the handheld camera is at the correct distance from the bar code; or~~

~~a projected image, wherein the projected image appears in focus for the user only when the handheld camera is at the correct distance from the bar code.~~

8~~10~~. An article comprising

a computer-readable storage medium that contains instructions, which when executed by one or more processors result in performing operations comprising:

sensing an image of the bar code including automatically detecting the presence of the full bar code in the image;

providing a focusing aid prior to taking a picture to enable a user to place a handheld camera at a correct focus distance from a bar code;

generating an audible or visual indication to the user when the distance from the handheld camera when the distance from the handheld camera to the bar code is correct;

taking a picture of a bar code with the handheld camera, the picture being retained as a stored image representing a rectangular array of pixels; and

analyzing the stored image using a processor to decode the bar code~~.~~;

wherein providing the focusing aid comprises projecting at least one visible light image onto a surface containing the bar code, wherein the at least one visible light image provides a visual indication which includes a projected image that appears in focus to the user only when the handheld camera is at the correct distance from the bar code.

9~~11~~. The article of claim 8~~10~~, wherein the operations further comprise the operation of wirelessly transmitting information about the bar code to another device.

10~~12~~. The article of claim 10~~11~~, wherein the operations further comprise the operation of receiving information from the other device about an object identified with the bar code.

~~13. The article of claim 10, wherein the at least one visual light image includes:~~

~~two beams of light that converge when the handheld camera is at the correct distance from the bar code;~~

~~two images that overlap when the handheld camera is at the correct distance from the bar code; or~~

~~a projected image, wherein the projected image appears in focus for the user only when the handheld camera is at the correct distance from the bar code.~~