KODAK DIGITAL CAMERA EFFECTS

Background
Kodak wanted to research the feasibility of incorporating digital effects into their popular EasyShare™ camera product line. These cameras are most commonly used for recreation. Therefore, Kodak asked the team to prototype fun and unique effects. They let the team decide which specific effects to develop. In fact, Kodak’s number one requirement was for the team to be creative.

The Technology
The team used the EasyShare™ V530 camera to develop the effects. The camera had:
♦ 5MB of RAM that the effects could use.
♦ 130 KB of program space for code development.
♦ An ARMv5TEJ instruction set running on an ARM RISC processor at 175 MHz.

The camera’s firmware loaded the effects from an SD card in real time. Since the firmware was development quality, the team had to ask Kodak for certain functions and bug fixes. Updates to the firmware included access to button events and camera orientation bug fixes.

Effects
Applying the effects couldn’t be easier! Simply select an effect from the menu. The camera will display a preview of the effect in real time. Some effects allow the user to adjust aspects of the picture before application. The final image is ready to print and frame in a few seconds!

The Development Process
The team used the evolutionary development process. This process helped the team overcome a steep domain learning curve while still allowing Kodak to see functional effects. The process also facilitated new ideas for subsequent iterations. The key steps of this process were:
♦ Develop a set of 5-8 effects
♦ Allow Kodak to review the effects
♦ Receive feedback from Kodak
♦ Incorporate the feedback into the development of the next set.