



## ABSTRACT

An image processing apparatus (30), which can solve the problems of delay in dot generating in beginning portions of areas of low or high density and/or tailing after finishing areas of low or high density and carry out speedy binary coding image processing without accompanying side effects of quality depletion and without the need to utilise a complicated processing circuit. It includes error correction means (34) which corrects multigradation image data (200) and outputs it, threshold error setting means (32) which sets a binary coding threshold value based on the gradation value of said target pixel multigradation image data (200) and binary coding means (36) which, based on the set threshold value, converts the previously mentioned corrected pixel data into the previously mentioned bigradation image data and outputs it; the gradation value of the previously mentioned target pixel multigradation image data being data, the median value of the previously mentioned first gradation value and second gradation value being  $m$  and the previously mentioned threshold value being  $slsh$ , the previously mentioned threshold setting means (36), when the gradation value of the previously mentioned target pixel multigradation image data is in the neighbourhood of the previously mentioned first and second gradation values, the binary coding threshold value is set within the tolerance range shown in the following equations:

when  $data < m$ ,  $data \leq slsh \leq (m + data) / 2$ ,  
when  $data > m$ ,  $(m + data) / 2 \leq slsh \leq data$ .