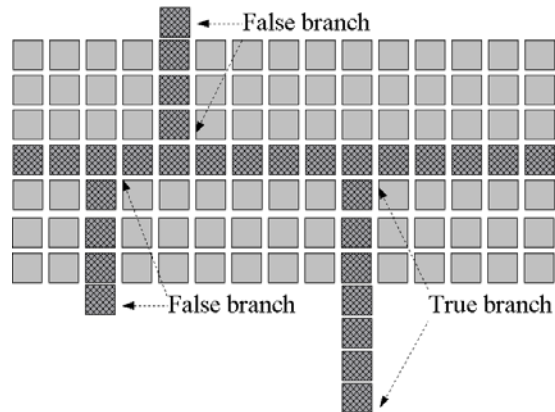


Image Analysis

Exercise 10

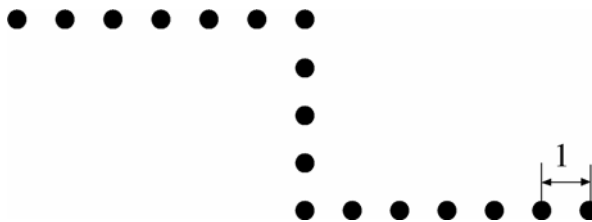
13.11.2003

1. Skeleton of the binary image is obtained with *Distance Transform* algorithm for the chessboard metrics. The skeleton is traced for conversion into digital curves. Design algorithm for removing false skeletal branches caused by the border noise.



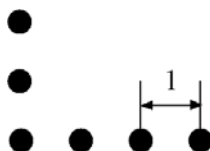
2. Construct the feasibility graph $G(P_1, \epsilon)$ for the given curve P_1 with for the error tolerance $\epsilon=1$. Distance between two consequent points is 1.

Curve P_1 :



3. Find *min-#* approximation of curve P_1 as the shortest path in the graph $G(P_1, \epsilon)$ for $\epsilon=1$.
4. Find *min- ϵ* approximation of curve P_2 for two segments $M=2$ by dynamic programming algorithm.

Curve P_2 :



5. Go to the web page <http://cs.joensuu.fi/~arvio/english.html> and fill in the evaluation form for *Image Analysis* course. In grading, follow the same principle as teachers grade your courses (3 = excellent, 2 = good, 1 = satisfactory, 0 = failed). Constructive comments for the “*Ideas for next year*” will be appreciated students taking this course some time in future!