

METHOD AND APPARATUS FOR MACHINE VISION CLASSIFICATION
AND TRACKING

Abstract of the Disclosure

5 A method and apparatus for classification and
tracking objects in three-dimensional space is described.
A machine vision system acquires images with a video
camera (2) from roadway scenes (6) and processes the
images by analyzing the intensities of edge elements
10 within the image. The system then applies fuzzy set
theory to the location and angles of each pixel after the
pixel intensities have been characterized by vectors. A
neural network interprets the data created by the fuzzy
set operators and classifies objects within the roadway
15 scene (6). The system also includes a tracking module
(22) for tracking objects within the roadway scene, such
as vehicle, by forecasting potential track regions and
then calculating match scores for each potential track
region based on how well the edge elements from the target
20 track regions match those from the source region as
weighted by the extent the edge elements have moved.

25

30

This Sheet Has Been Replaced



35