

## Nano Drive Control for Stepping Motors and its Application to ‘Mascot Robot’ Project

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*Abstract: Nano Drive control for 5 phase stepping motor is presented based on fuzzy control technology. It enables to divide each revolution/rotation into 5 million equiangular positions by keeping normal speed, torque, low vibration, small heat loss, and low electric power consumption. The products are now releasing in the real market. Photo 1 shows the externals of 5 phase stepping motors and driver ‘INS50 series’ by Nano Drive control. The outline of the algorithm is mentioned with several experimental results by using DVD demonstration.*

*The stepping motors are applied to a part of the on going ‘Mascot Robot’ project included in ‘Development Project for a Common Basis of Next-Generation Robots’” sponsored by NEDO (New Energy and industrial technology Development Organization, Japan), i.e., the nano drive controlled stepping motors are used to develop a mobile part shown in Photo 2. Its design-concept is also introduced by using DVD video images.*



Photo 1  
Nano Drive control ‘INS50 series’

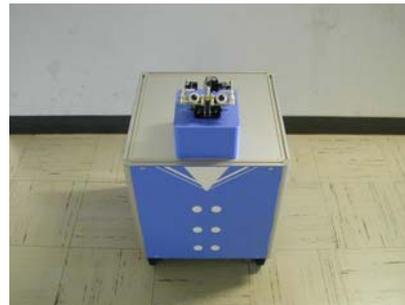


Photo 2  
Mobile Part of the ‘Mascot Robot’