



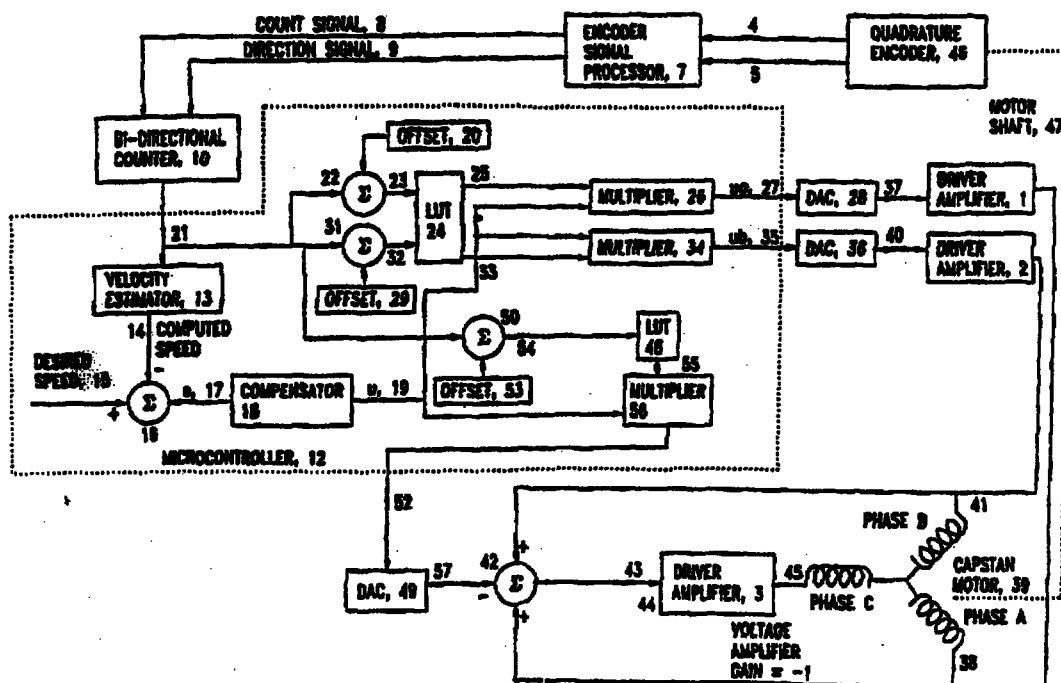
PCT

WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶ : H02P 6/06, 8/16		A1	(11) International Publication Number: WO 96/15583
			(43) International Publication Date: 23 May 1996 (23.05.96)
(21) International Application Number: PCT/US95/14650		(81) Designated States: CA, CN, JP, KR, MX, SG, European patent (AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).	
(22) International Filing Date: 9 November 1995 (09.11.95)			
(30) Priority Data: 08/336,981 10 November 1994 (10.11.94) US		Published With international search report.	
86 9701887-3			
(71) Applicant: SEAGATE TECHNOLOGY [US/US]; Building 15, 920 Disc Drive, Scotts Valley, CA 95066 (US).			
(72) Inventor: LEWIS, Martyn, A.; 1135 Las Pulgas Place, Pacific Palisades, CA 90272 (US).			
(74) Agents: HANKINS, John, A. et al.; Lowe, Price, LeBlanc & Becker, Suite 300, 99 Canal Center Plaza, Alexandria, VA 22314 (US).			

(54) Title: METHOD AND APPARATUS TO MAXIMIZE THE TOP SPEED OF BRUSHLESS DC MOTORS



(57) Abstract

A method and apparatus for increasing the top speed of a brushless DC motor (BLDCM) or a closed loop step motor (CLSM) which are driven by substantially sinusoidal signals on each of their leads. An additional signal is generated which has a fundamental frequency component at a harmonic of the frequency of the main sine wave signals applied to the motor leads. The additional signal is added to the normally applied signal on each motor lead. The amplitude and phase of the additional signal are chosen to increase the top speed of the motor, or alternatively, to reduce the supply voltage needed for a given speed.