

88 年度國家標準實驗室計畫執行成果摘要表 論文

計畫名稱	中文	建立及維持我國時間與頻率國家標準		
計畫編號	英文	The Maintenance and New Technology Establishment of National standard for Time and frequency		
計畫編號	TL-001-P201(88)			
執行單位	中華電信研究所		執行期間	87 年 7 月至 88 年 6 月
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成果名稱	中文			
	英文	DESIGN AND IMPLEMENTATION OF 4 PORTS COMPUTER TIME SERVICE SYSTEM IN TAIWAN		
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撰寫日期	中華民國 88 年 3 月 日		撰寫語言及頁數	英文 6 頁
解密期限	中華民國 年 月底解密		機密級	
關鍵詞	TCTSS: Taiwan's Computer Time Service System			
	IPC: Industrial Personal Computer			
	PSTN: Public Switching Telephone Network			
	DRAM: Dynamic Random Access Memory			
內容摘要：				
<p>In this article, Taiwan's Computer Time Service System (TCTSS) will be detailed. The system was developed with utilizing an Industrial Personal Computer (IPC) to protect the system against corrosion, moisture, dust, and to make maintenance simple. An imbedded PC bus level time code generator is synchronized to Inter-Range Instrumentation Group (IRIG) time signals, which is used to provide a source of time data and time stamps for measuring the path delay ($\text{RoundTripDelay} = \text{StopTime} - \text{StartTime}$). For the purpose, all formal structure and detailed information for implementation will be specified including timing diagram, interrupt pulse generated, Software-switch, Watchdog Timer and intelligent Communication Module.</p> <p>TCTSS synchronizes the national standard time and distributes it in a Public Switching Telephone Network (PSTN) operating at rate from 1200 to 14400 Bit Per Second (BPS). It not only provides one way time dissemination but also offers path delay measured and compensated.</p> <p>In addition, the software algorithm, user interface and operation of each detailed module will be also discussed.</p>				