

## Stephen Gabeler, VP Electrical Engineering, Virgin Instruments

Updated May 28, 2009

### Professional Experience

#### Life Science Instrumentation:

2006-present	Virgin Instruments	VP Electrical Engineering
2004-2006	MDS Sciex	Principal Engineer, EE Architect
1998-2004	Applied Biosystems	Principal Engineer TOF MS R&D
1994-1998	PerSeptive Biosystems	Director ESITOF, Principal Research EE
1988-1994	Millipore/Waters	Principal Staff EE, Corporate Core Instrument Research

#### Industrial Barcode and Control Systems:

1973-1988	Computer Identics	Systems Engineer, Director of R&D, V.P. of R&D
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#### Medical Instrumentation:

1971-1972	Automated Health Systems	Electrical Engineer
1968-1970	Hewlett Packard Medical	RPI EE Co-op

#### Early:

1970	Education Development Center	Photographer
1967	Sigmatron	EE technician
1966	PM&E Electronics	EE manufacturing test technician

### Product History

- 4800 MALDI (matrix assisted laser desorption ionization) tandem time of flight mass spectrometer – 3 patents issued
- 4700 MALDI tandem time of flight mass spectrometer (first commercial product worldwide) – 2 patents issued
- Voyager MALDI time of flight mass spectrometer platform products
- Mariner ESITOF (electrospray time of flight) mass spectrometer (first commercial product worldwide) – patent issued
- ConSep 100 convective liquid chromatography system including four solvent programmable liquid composition and flow control with integrated UV absorbance detector – patent issued, 2 applications abandoned
- 996 PDA liquid chromatography photodiode array spectrophotometer – patent application abandoned
- Research prototypes of combined liquid chromatography and mass spectrometer instrumentation – patent issued
- StarNode barcode data collection network family of products including terminals, network repeaters, ISA bus network interfaces and VME bus network interface
- ScanStar industrial high speed barcode laser scanner family of products – patent issued
- FCP handheld barcode reader family of products – patent issued
- PAC-II family of 6800 / 68000 based industrial control systems
- Co-inventor of Code 128 – one of the most ubiquitous barcodes in use today
- PDP-11 tape reader interface and inter-processor bi-directional DMA bridge
- Computer Identics industrial custom barcode material handling, high speed sortation, WIP tracking, assembly verification, inventory, order picking and shipping systems
- Marine container terminal automatic identification and inventory systems
- Railroad ACI (automatic car identification) scanners and computerized switchyard inventory control systems
- Bayshore Hospital Multi-Phasic – the first health screening clinic with fully automated data acquisition of physiological measurement instrumentation
- Custom PDP-11 data acquisition interfacing of Coulter blood cell counters and SMA automated blood chemistry analyzers
- Automated EKG product test stand – the first use of computerized testing at Hewlett Packard
- EKG patient protection circuit research – supporting pioneering work of Dr. Michael DeBakey – later put into production
- 8805B Carrier Amplifier – AC carrier excited bridge transducer amplifier with automatic quadrature nulling and synchronous demodulation
- Prototype of the first addressable cross grid electroluminescent display – later used in military aircraft
- Language Laboratory headphones

## **Issued Patents**

7,518,107	Methods and apparatus for time-of-flight mass spectrometer
7,518,104	Methods and apparatus for time-of-flight mass spectrometer
7,491,931	Power supply regulation using a feedback circuit comprising an AC and DC component
6,512,225	Tandem time-of-flight mass spectrometer with improved mass resolution
6,441,369	Tandem time-of-flight mass spectrometer with improved mass resolution
5,917,184	Interface between liquid flow and mass spectrometer
5,526,682	Method and apparatus for analyzing sample solutions
5,423,661	Fluid metering, mixing and composition control system
4,920,255	Automatic incremental focusing scanner system
4,121,121	Follower response control circuit

## **Education**

Rensselaer Polytechnic Institute, BSEE/MSEE (incomplete) 1966-1971 – Tau Beta Pi