

William B. White

Bill White co-founded Offenberger & White, Inc., a Marietta-based marketing consulting firm, in February, 1985. Prior to 1985 Bill was a co-founder and director of marketing of Queue Systems, Inc. from 1980 to 1985. Before establishing Queue, White was director of marketing for Forma Scientific, Inc., Marietta, Ohio, (now Thermo Electron) from 1976 to 1980, following several years as chief technical researcher and writer in the Forma R&D and engineering group.

In December, 2007, Bill and Ron Salter, President of Salter & Associates, LLC, Vienna, WV, established a strategic alliance linking the two firms in a business development and resource sharing program in support of existing and new clients worldwide.

Now in its 23rd year, Offenberger & White (OffWhite) has completed more than 8,800 marketing-oriented projects for local, national and international clients in industrial and consumer segments including banks, hospitals, colleges and universities, and selected vertical industries based on applications of emerging technologies. Known primarily for marketing system integration, OffWhite has most recently developed a suite of services and processes designed to create, communicate and exploit unique selling propositions, many of which are created by the firm itself.

Throughout his career, White has provided extensive technical assistance in the design, development, application, marketing and documentation of numerous applied technologies employed by the biomedical, life science and industrial laboratory community, from heating, refrigeration, humidification, vacuum and microprocessor systems to industrial design of control panels, cabinets and accessory systems. His product development experience includes market research, engineering direction, branding and technical marketing programs for an array of equipment, instrumentation, subsystems and processes, including but not limited to:

- Cell culture systems and multiplex three-gas incubators (above and below ambient O₂ environments)
- Automatic CO₂ incubators
- Fermentation and mammalian cell culture bioreactors (airlift and stirred vessel),
- Sensors and microprocessor-based controllers
- Class II, Type A2 biological safety enclosures for robotic and automated process systems
- Biological safety cabinets (Class I, II and III), total containment systems, glove boxes and barrier isolators
- Custom manufactured, hybrid biological containment and cell culture systems
- Vertical lift, automated storage and retrieval integration into environmentally controlled enclosures
- Cascade and mixed-refrigerant autocascade cooling systems, ultra-low temperature freezers, cryogenic storage systems, reciprocal and orbital compressor systems
- Furnaces, ovens, water baths, centrifuges, autoclaves and microwave moisture analyzers
- Freeze dryers and lyophilizers
- Laboratory animal research products, enclosures and mobile platforms
- Blood separation, collection, fractionation, cataloging and storage products
- Fiber optics, including research grade fused silica, and fiber optic byproducts such as polyamide catheterization tubing
- Refractometers
- HPLC capillary columns
- Humidity cabinets, stability testing and plant growth chambers and walk-in rooms

OHIO

521 Fort Street
PO Box 1012
Marietta, OH 45750

740.373.9010
800.606.1610
FAX: 740.373.9125

WEST VIRGINIA

417 Grand Park Dr.
Suite 205
Vienna, WV 26105

304.485.4545
888.485.4550
FAX: 304.428.2329

WWW

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- Clinical genetics cytology screening and reporting
- Transgenic cell cultures and diagnostic systems for clinical virology
- Anaerobic microbiology systems
- Positive and negative pressure cytotoxic isolators and barrier isolators
- Polymerase chain reaction (PCR) thermal cyclers for DNA amplification
- Web-based alarm, monitoring and data management systems for compliance with U.S.FDA (21) CFR pharmaceutical development

White has published numerous papers on technology development in clinical, life science and biotechnology industries. He has created, designed, written, and produced user and maintenance manuals, sales literature and catalogs, technical articles, training programs, venture capital and corporate presentations, advertising campaigns and Web sites.

As a former territory sales and marketing manager with P&L responsibilities, he has a working knowledge of markets, equipment, instrumentation and information systems offering a unique perspective in development of marketing programs. He has written extensively on laboratory and industrial instrumentation systems, and has authored numerous strategic business assessments and tactical marketing plans. His technical range in development of white papers, catalogs, trade advertisements, support programs and competitive analyses embraces products, services and processes over a variety of disciplines:

- Stem cell acquisition, processing, long-term storage, archival technologies and marketing
- Use of narrow bandwidth ultraviolet light and copper-enriched stainless steel to achieve active background contamination control in a cell culture incubator.
- Adaptation of mechanically refrigerated vacuum cold trap refrigeration (process) to biological archives (storage)
- Development of single compressor, mixed-refrigerant autocascade technology to replace liquid nitrogen vapor and conventional cascade (multiple compressor) systems for ultra-low and cryogenic cooling
- Biological and cellular significance of glass transition temperatures (ice re-crystallization) at -130°C
- Integration of scroll compressor to replace conventional reciprocating compressors in mixedrefrigerant, autocascade cooling systems
- Development and application of architectural louvers, sun blades and ventilation components
- Integration of microprocessor-based controllers to monitor, accumulate and report internal performance and status of interstage heat exchangers in cryogenic and cascade cooling systems
- Anaerobic microbiology incubation and transfer systems to include interchange sequence techniques and use of palladium catalysts to maintenance of optimum atmospheres
- Development of innovative multiplex gas control systems using adjustable flow meters to create accurate *in vitro* models of the *in vivo* environment (Queue Multiplex Three-Gas Incubator)
- Application of microprocessors, mechanical switches and optical sensors to locate, energize and control electro-magnetic drive systems for orbital shaker applications
- Inventory management, security, access control and documentation of high value biological in the cryopreserved environment
- Security considerations related to access to pathogenic organisms in repository freezers
- Microprocessor-based control and monitoring of airlift and stirred vessel bioreactors with PID (proportional, integral and derivative) controls

- Comparative function of biological safety cabinets, Class I, Class II and Class III containment systems
- Design and marketing of programmable glassware washing and sterilizing systems
- Development of computer-based liquid handling systems for high throughput compound screening
- Development and branding of Legaci™ integrated cascade refrigeration systems using Copeland reciprocating compressors and DuPont Suva refrigerants
- Development of ergonomically-enhanced biological safety cabinets
- Plutonium-powered free piston Stirling engine satellite batteries deployed for deep-space exploration
- Launch of wireless broadband technologies and services
- Development of a digital refractometer using Optimatrix™ dual-array light sensor technologies
- Development of server-based refrigeration systems for use in non-distributed commercial cooling applications in supermarkets and convenience stores
- Application of EnergyBalance™ approach to theoretical design of ultra-low temperature servers for pharmaceutical, blood component and electronic testing.
- A Web-based synthesis of ten unique service initiatives within a single marketing entity using shared databases and functional utilities. (The Voinovich Center for Leadership and Business, Ohio University, Athens, OH.)

Bill has created numerous systems concepts and trade names, logos and icons useful for brand management, education, component branding and intellectual property enhancement. Examples include Optimatrix™, Legaci™, IntrLogic™, The Future, Inside™, Queue, Cryostar®, Cellstar®, UniPressure PreFlow™, SterilGARD III Advance°, e!release®, Sequelle®, Certifyi®, AIRe™, Active Background Contamination Control™, EnergyBalance™, Vertical Component Integration™, EnRoute™, Laminar Topography™ and more.

He has trained laboratory supply dealers throughout the United States and Canada and has conducted numerous field-level training programs for independent manufactures' representatives and service/maintenance and certifier companies in the USA, Japan and Singapore. As a lecturer on cell culture applications and marketing, White has presented many technical programs for sales seminars and venture capital fund managers.

Following his early work in application of fax-on-demand document management systems, and as bandwidth, memory and stable electronic file protocols entered the mainstream, White directed the development of the firm's online content management system Ed.it™, a browser-based process for Web site management simplified for use by non-technical business and product managers for maintenance of Web sites and document libraries. Together with Ed.it™, White pioneered company's internet-based WebCentric™ and vector-based marketing program to provide a platform upon which clients can build sharable, peer-to-peer integrated information repositories "to empower the last person hired." His guest appearance before a symposium of the American Association for Cancer Research (Philadelphia, PA) was one of the first to stress the need for user-managed, Web-based product and technical support libraries through enriched content management systems operated by non-technical Web site owners.

White is a charter affiliate of Design Services Network (DSN), an intellectual property initiative of Emerson Climate Technologies, Emerson Electric (NYSE: EMR), and remains an active product

development and technical marketing consultant among the DSN network of independent refrigeration, airflow, acoustic, thermodynamic, fluid dynamics, electronic and process engineers.

In June, 2006, White was named Director of Marketing, Esco Micro Pte. Ltd., 21 Changi South Street, Singapore. Today, he continues to serve as the Esco's senior information architect and content developer managing a multi-national Singapore-based staff in support of 300 sales offices in more than 100 countries.

A native of Marietta, Ohio, White earned a BA in Managerial Economics from Marietta College. He served four years in the United States Marine Corps. White served as an adjunct lecturer in Marketing and Case Management (MGT 432) at Marietta College since from 2002-2006. He did undergraduate work in English and communications at Ohio University.

White served for two years as Chairman, Advisory Council, Marietta College, Brachman Department of Economics, Management and Accounting, and was a Member, Advisory Council, Marietta College Mass Media Department. He has served on the Washington State Community College Advisory Council; President, St. Mary's School Board; Director, Marietta Memorial Health Foundation; Member, Biomedical Marketing Association. He is currently a member of the Executive Board, Marietta Area Chamber of Commerce Board of Directors where he serves as Vice Chairman, Economic Development Committee and Chair, Historical Preservation Ordinance Sub-Committee. In February, 2007, he was appointed as a charter member of the Board of Trustees, Ohio Music Education Association Foundation (OMEA), a non-profit organization established to increase and perpetuate the role of music education in Ohio public schools.

He is a partner in Design Innovation Group, LLC, an engineering and product design firm, Asheville, NC; and Marietta Interactive, LLC, a Web marketing laboratory, Marietta, OH. He is a member of the board of directors of Vanguard Paints and Finishes, Inc., and a former director of The Airolite Company.

When not at work, Bill enjoys rowing his Vespoli 1X racing scull. An avid songwriter, Bill spends quality time on his Ensoniq SD1 synthesizer. He and his wife Diane, a radiation therapy technologist, have been married for 35 years. They are parents of two children.