

The Act of WALKING and Performing SIMO Activities

By George Miko, Miko Productivity Group and International MODAPTS® Association

NOTE: For ease of applying the Walking codes, the International MODAPTS® Association removed the code W4.5 from the manual. This code was to be applied if there was unrestricted walking. The W5 per step is used in walking in a restricted area. So if the area is deemed unrestricted or restricted the analyst will award a W5 for either condition.

The element WALK (W5) is defined as stepping forward, backwards, sideways, or a partial or complete turn of the body by means of the legs, with the exception of a sidestep during a long sideways arm movement. This exception of the small sidestep of the leg would be considered an assist for body balance and would not be coded. This is similar to a person performing an M4 move greater than 12 inches because the trunk moves simultaneously as the arm extends.

Similar to arm movements is the fact that walking is also considered a low conscious activity (Page 41 in the MODAPTS® manual). Rule #1 for Movement activities is that following a WALK an M2 is awarded.

When you have a combination of Walking and performing either a Get or a Put activity simultaneously you must consider the high conscious versus low conscious rules that apply when evaluating an operation (Reference: Pages 36-37 in the MODAPTS® manual).

The rule is, if one activity is low conscious and the other activity is high conscious control allow the highest total MOD value and do not record the lower value. The following examples are actions that occur simultaneously while walking and how they will be awarded:

One, if an operator was walking more than (2) steps ($W5 \times 2 = 10$ MODS) and simultaneously obtaining a fastener(s) from their apron, the MOVE M2 and the GET G3 (high conscious) are internal to that walk and they would not be

awarded. Only the higher Mod value of 10 MODS for the W5's would be awarded.



Second, if an operator only takes only one step while simultaneously performing a

high conscious activity, again the rules for high conscious versus low conscious activities are applied.

For example, with (1) step W5 (low conscious activity) occurring simultaneously while an M3G3 (high conscious activity) is being performed, you would award the highest MOD value, in this case the M3G3 or (6) MODS would be awarded and the W5 would not be recorded. The W5 would be considered internal to the M3G3 activity.

For additional information, please contact the Miko Productivity Group at gmiko1@peoplepc.com or visit www.mikopg.com.

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A Tribute to Bertram A. Colbert

By Michael D. Schinnick

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MODAPTS® was introduced into North America by a ten year distribution exclusive rights contract from Heyde Dynamics of Australia to Price Waterhouse, Inc. The contract was initiated in 1970, with Bertram (Bud) A. Colbert as the Project Manager. As a financial management firm, Price Waterhouse began installing MODAPTS® in banks and financial institutions. I have been told that they successfully marketed a two-week training and installation program for \$10,000.00 which were "Big Bucks" in the 1970s.

As I write this I am considering developing a marketing strategy for installing MODAPTS® in financial intuitions. Chris Heyde and Bud Colbert actually suggested this to me at the 1986 MODAPTS® meeting in Miami. At that time of my long life, however, I was having too much fun living on my 48 foot sailboat and working as a yacht captain in Key Largo. Also during the 1986 meeting Bub Colbert, Tom Seachrist, Chris Heyde and someone from California named Don (not Barker) formulated the strategy for what was to become The International MODAPTS® Association.

During my second journey to Australia, Chris Heyde gave me the legal rights to MODAPTS® in North America. He asked me to form a Board of Directors that included academia, manufacturing, and consulting/training. As the new MODAPTS® Copyright owner, Bud was the first person I contacted. I told him that I did not want ownership of MODAPTS® and needed his corporate and organizational skills to help make MODAPTS® an inexpensive, accessible methodology for work measurement.

As the Vice President of Engineering for Abbott Laboratories in Abbott Park, Chicago, Bud had considerable resources at his disposal. Many of the original twelve members of the Board of Directors remember rather lavish meetings and dinners hosted by Bud Colbert. He was a driving force in the formative years of IMA. Don Barker was particularly impressed that the dinners and drinks were provided by Abbott gratuitously (i.e. free).

Bud Colbert will be remembered for his enthusiasm, wit, intelligence, and generosity. He was a good friend to MODAPTS® and to us. His stature was small but his heart, his presence and his vision was huge.



Bertram "Buddy" Colbert (right) was a recent recipient of the prestigious IMA Heyde Award

Bertram A. Colbert 1926-2008

Bertram A. "Buddy" Colbert was born November 12, 1926 in Chicago, lived in Deerfield for 10 years, and died Friday, March 28, 2008, at Condell Medical Center in Libertyville. He was a direct descendent of Elder William Brewster of the Mayflower. He was also a descendent of Jean Baptiste Colbert, the finance minister of Louis XIV of France, and of George Ketchum, a surveyor on the Erie Canal and developer of the California aqueduct system. Raised in the Lakeview section of Chicago, Bud graduated from DePaul Academy. After graduation, he enlisted in the Navy and worked on the Manhattan Project which developed the first atomic bomb during WW II. After the war, he worked under Dr. Enrico Fermi at the University of Chicago on the development of the Cyclotron, the first atom collider. He earned a Bachelor of Science degree in industrial engineering from the Illinois Institute of Technology in 1950.

A registered professional engineer and certified management consultant, Bud was one of the first management consulting partners of Price Waterhouse. He published over 100 articles, was an arbitrator, and was the vice president of the International MODAPTS® Association. He retired as manager of corporate industrial engineering at Abbott Laboratories.

Preventing Waste Due to Fatigue and Musculoskeletal Disorders

*By Thomas J. Armstrong, Ph.D.
University of Michigan*

Predetermined time systems, such as MTM, Work Factor, MOST and MODAPTS®, are important lean manufacturing tools that enable employers to estimate labor costs and to identify work equipment and methods that minimize wasted motions and time.

These systems provide a framework for decomposing jobs into elements and estimating elemental times. The elemental times then can be used to identify and select work methods and equipment that minimize waste due to excessive or unnecessary motions.

Predetermined time systems also provide a framework for preventing waste that can result from ergonomic stresses and cause localized fatigue and

musculoskeletal disorders of the hand, wrist and forearm. Principal among these stresses are excessive hand force and extreme wrist and forearm postures, which can lead to waste by impairing work performance, requiring recovery time, requiring medical evaluations and treatments and through absenteeism.

Risk of fatigue and musculoskeletal disorders can be assessed from force and posture time profiles. Force and posture profiles can be estimated by examining the action of the hand, hand posture, work station, tools and materials for each work element. Force and posture and profiles provide insights for preventing fatigue and MSDs and for evaluating job improvements. ■

Thomas J. Armstrong is a Professor in the Departments of Industrial and Operations Engineering and Biomedical Engineering at The University of Michigan. He is Director of the University of Michigan Center for Ergonomics and Rehabilitation Engineering Research Center on Ergonomics. Dr. Armstrong has a B.S.E. degree in Aerospace Engineering, an M.P.H. degree in Industrial Health, and a Ph.D. degree in Industrial Health, Physiology and Engineering all from the University of Michigan. His research includes: development of methods for analyzing physical work requirements, development of biomechanical models of hand function, analysis of the relationship between physical work requirements and musculoskeletal disorders, design of work stations, hand tools and keyboards, identifying ways of facilitating the return to work of injured workers, analysis and design of jobs for accommodation of restricted workers and design of ergonomic programs for control of work related musculoskeletal disorders.

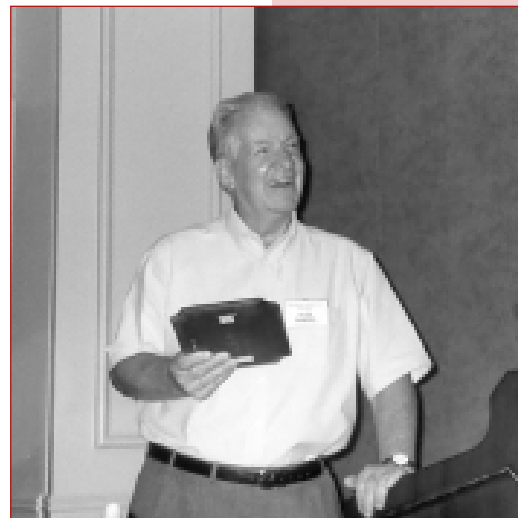
Glen Gabriel Retires from the IMA Board of Directors

By Glen Gabriel

Isn't it odd, how sometimes you become fascinated with something and that something becomes important to you? It happened to me in the spring of 1990 when I spent a week in Michael Shinnick's MODAPTS® training class in Kansas City.

It goes without saying that I enjoyed the class, and I took my new found know-how back to my work at North Bay Industries. Up until that time all of our work standards for contract work had been determined by stop-watch time studies, and I thought we had done a pretty good job. That was until I began to study our work using MODAPTS®. I found that our work standards were either too tight or too loose. We, of course, were not adept at gauging the skill of the persons doing the work for the stop-watch time study and as a result we got it all wrong.

MODAPTS® came to the rescue and a few years later when North Bay Industries had a Department Of Labor Audit, the Auditor took a quick look at our contract work studies using MODAPTS® and accepted them all without any question.



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Glen Gabriel has made significant contributions as a member of the IMA Board of Directors. On behalf of the IMA, thank you Glen for all your service and dedication to the IMA.

The more I worked with MODAPTS® the more interesting it became. I was invited to attend the Spring Conference at the Holiday Inn in Cocoa Beach. The one most memorable thing about that Spring Conference was the kids on Spring Break. They nearly demolished the hotel, and left dismay and disappointment in their wake. We didn't go back for a while.

Nevertheless I continued to feel strongly that MODAPTS® was and is the best work analysis system going and when I was invited to serve on the Board of Directors I was honored to accept. And then the opportunity came to serve as Vice President of Certification and the challenge of up-dating the Manual and the Certification Test was welcomed.

Over the years, I became an instructor for MODAPTS® and have taught classes of two people and of twenty five people and enjoyed them all. I hope to continue to teach MODAPTS® to encourage the use of MODAPTS® around the country.

The time has come for me to say goodbye to the Board of Directors and our annual trek to Florida. I am grateful for the good friends we have had with the IMA group. And I hope to stay in touch and continue to work with you in an advisory position. I will continue to teach MODAPTS® courses when the occasion occurs.

Thanks again for 18 years of pleasant association. ■

International MODAPTS® Association

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