

Work Domain Analysis (1 Day) – Workshop Description

Work domain analysis identifies the functional structure of a socio-technical system. A work domain is a functional space in which work is accomplished for a specific purpose. The functional structure of a work domain will encompass properties ranging from object descriptions, through specific and general functions, to values and specifications of system purpose.

Work domain analysis is one stage of Cognitive Work Analysis, which is an analytic framework that sees widespread use within the discipline of cognitive systems engineering.

Examples of systems in which work domain analysis can be used to good effect are military command and control, civil air traffic control, transportation, communication, process control, power generation, power distribution, health care, management, and large-scale project infrastructure.

Seminar Objective:

This one-day workshop introduces the fundamental concepts of work domain analysis and offers an in-depth treatment of its rationale and how to do it. Work domain analysis is possibly the most challenging analytic method commonly used within cognitive systems engineering. Within this workshop, delegates can expect to develop a level of proficiency that will enable them to start using it within their own professional work.

Seminar Method and Materials:

The seminar is delivered primarily in an interactive presentation format with brief participatory exercises. For public offerings of this workshop, the exercises will involve design challenges associated with development and acquisition of a command and control system, a wildfire management system, a counterinsurgency system and a remotely controlled vehicle system. For a contracted in-house workshop, the contracting organization will be invited to identify a work domain of interest that delegates will use as a target domain for their group exercises. By the end of the workshop, delegates can expect to have developed a solid analytic product that can form the basis of a complete analysis of the selected domain.

Seminar Availability:

This seminar is available worldwide for public and on-site delivery (i.e. at client-provided facilities).

About our seminar presenter:

Dr Gavan Lintern:

Gavan Lintern earned his Ph.D. in Engineering Psychology from the University of Illinois in 1978 and M.A. and B.A. degrees in experimental psychology from the University of Melbourne, Australia, in 1971 and 1969. He has worked in aviation-related human factors research at the Defense Science and Technology Organisation (then known as the Aeronautical Research Laboratories), Melbourne (1971-1974), and in flight simulation research on a US Navy program in Orlando, Florida (1978-1985). He returned to the University of Illinois in 1985 to take up a position as a faculty member at the Institute of Aviation (1985-1997). He has subsequently filled positions as head of human factors at the Defence Science and Technology Organisation in Melbourne (1997-2001), senior scientist with Aptima, Inc in Boston (2001-2003) and chief scientist with General Dynamics Advanced Information Systems in Dayton Ohio (2003-2009).

Dr. Lintern's primary areas of expertise are in cognitive analysis and design of complex knowledge and information systems, instructional system development for aviation and information-intensive systems, and e-Learning development of professional and technical courseware. He has high-level skills in Cognitive Work Analysis, Ecological Interface Design, Brahm's human workflow modeling and web design. He is currently working on design of Command & Control systems, development of an optimum manning framework, and integration of Cognitive Engineering with Systems Engineering.

He has over 30 publications in reviewed journals and numerous symposium papers and book chapters. He is a Fellow of the Human Factors & Ergonomics Society, a recipient of the Jerome H. Ely Award, 1991, best paper in Volume 32 of Human Factors and a recipient of the George E. Briggs Dissertation Award, 1978. He has served on the Editorial Board, Human Factors (1986-2000) and still serves on the Editorial Boards of The International Journal of Aviation Psychology (since 1991) and Cognitive Engineering & Decision Making (since 2007).

Gavan retired from General Dynamics in early 2009 and now works part time as an industry consultant, otherwise filling in his time as minder of the home pets and general home roustabout. He published a book titled The Foundations and Pragmatics of Cognitive Work Analysis in April 2009.