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What is Web Human

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What is web-HUMAN and the Skidmore College *web*-Human Teaching Simulation

Occasionally in the past a person reading this annual report is 'new' to the job and unfamiliar with my involvement in *web*-HUMAN. In such a case I include an informational 'orientating section' to answer their natural question "What is this *web*-HUMAN?". This year, unusually, there are two such possible readers, the Dean and the Biology Chair. Hence this section below.

Web-HUMAN [at http://placid.skidmore.edu/human/] is a web-augmented delivery and enhancement of Dr. Tom Coleman's classic HUMAN teaching simulation. This project was begun in in 1989-1990 as a joint effort between myself [Roy Meyers, Skidmore, RSM] and Leo Geoffrion [LDG, now retired 'Senior Systems Administrator', SGS Testcom - but still willing to work on an educational project].

It provides a physiology teaching pedagogical tool to Skidmore students and to all physiology educators via a no-fee, web browser-accessible and interactive full implementation plus augmentation of the Coleman HUMAN mathematical model physiology simulation. The *web*-HUMAN model is *comprehensive*, encompassing 6 major core systems (cardiovascular, respiratory, renal, fluid balance, acid-base balance and thermoregulatory) and aspects of 3 other systems (nervous, endocrine and muscle metabolism). In each one 1 minute iteration 137 user-assessable *physiological variables* can be monitored by students (e.g. blood pressure, body temperature, sodium elimination rate in urine]. *Simulated experiments* can be run *by changing* one or more of 67 user-alterable physiological and clinical (forcing) parameters [e.g. subjects can be brought to high altitude or placed in desert conditions or given 'heart attacks', etc. and their responses then monitored]. A range of diagnosable and "treatable" clinical case patients are also available.

For student user support the model has graphics plotting of responses, save-retrieve experiment capability, a user's manual and on-line help. In addition, the latest version (9.x) offers a wide variety of preset "one-click" and run experiments and a new complete *clinical patient section* that includes pedagogically-oriented Hints and Analysis/Diagnosis sections.(see the accompanying New Features document).

The site has run approximately 95,000 simulation sessions by non-Skidmore users in the past year (see the accompanying Use Analysis document). Course users range from mostly Anatomy and Physiology courses (A& P - taught in secondary school advanced placement up through health professions programs (e.g. nursing, etc.) on through Medical School Physiology and post-graduate health science programs courses (physiology, pathophysiology and sometimes even part of a Pharmacology course) with the most common users still being four year colleges. There is a considerable geographic distribution of users with out-of-States user concentrations in European and former western Soviet Union Medical programs, Australia, Canada and South America in addition to some select Asian locations. The web site is maintained and upgraded by actively by Roy Meyers (mostly the physiology) and Leo Geoffrion (the heavy lifting) and has had some minor contributions/help from a range of past computer science and biology students, and from select colleagues on faculty e.g. Flip Phillips, psychology) and some critical ones from select former employees (now sadly retired) of Skidmore IT.

1) Those interested in a somewhat more *in-depth overview* can go to http://placid.skidmore.edu/human/human-docs/AboutHuman4.pdf .

2) Those interested in *a hands-on view* can try out the screen-by-screen "Teach Yourself How To Use web-HUMAN" tutorial [http://placid.skidmore.edu/human/humandocs/Intro2HUMAN_TutorialAllVersions/indexToTutorial.htm

l]. Both of these links can also be found on the right hand panel ***Resources*** panel of the opening web-HUMAN screen.