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Increasing Employee Productivity and Work Well-Being by Employing Affective Decision Support and a Knowledge-Based System

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Abstract : This employee productivity and work well-being effective system aims to maximise the work performance of personnel and boost well-being in offices. Affective computing, decision support, and knowledge-based systems were used in our research. The basis of this effective system is our European Patent application (No: EP 4 020 134 A1) and two Lithuanian patents (LT 6841, LT 6866). Our study examines ways to support efficient employee productivity and well-being by employing mass-customised, personalised office environment. Efficient employee performance and well-being are managed by changing mass-customised office environment factors such as air pollution levels, humidity, temperature, data, information, knowledge, activities, lighting colours and intensity, scents, media, games, videos, music, and vibrations. These aspects of management generate a customised, adaptive environment for users taking into account their emotional, affective, and physiological (MAP) states measured and fed into the system. This research aims to develop an innovative method and system which would analyse, customise and manage a personalised office environment according to a specific user's MAP states in a cohesive manner. Various values of work spaces (e.g., employee utilitarian, hedonic, perceived values) are also established throughout this process, based on the measurements that describe MAP states and other aspects related to the office environment. The main contribution of our research is the development of a real-time mass-customised office environment to boost employee performance and well-being. Acknowledgment: This work was supported by Project No. 2020-1-LT01-KA203-078100 "Minimizing the influence of coronavirus in a built environment" (MICROBE) from the European Union's Erasmus + program.
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