

## *Building Ontologies with Basic Formal Ontology*

Robert Arp, Barry Smith, and Andrew Spear

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In the era of “big data,” science is increasingly information driven, and the potential for computers to store, manage, and integrate massive amounts of data has given rise to new disciplinary fields such as biomedical informatics. Applied ontology offers a strategy for organizing scientific information in computer-tractable form, drawing on concepts not only from computer and information science but also from linguistics, logic, and philosophy. This book provides an introduction to the field of applied ontology that is of particular relevance to biomedicine, covering theoretical components of ontologies, best practices for ontology design, and examples of biomedical ontologies in use.

After defining an ontology as a representation of the types of entities in a given domain, the book distinguishes between different kinds of ontologies and taxonomies, and shows how applied ontology draws on more traditional ideas from metaphysics. It presents the core features of the Basic Formal Ontology (BFO) now used by over 100 ontology projects throughout the world, and offers examples of domain ontologies that utilize BFO. The book also describes the Web Ontology Language (OWL), a common framework for Semantic Web technologies. Throughout, the book provides concrete recommendations for the design and construction of domain ontologies.

### **Authors**

Robert Arp is a researcher and analyst for the U.S. Army at Fort Leavenworth, Kansas, who has worked on ontologies also for the U.S. Air Force and the National Institutes of Health. Between 2007 and 2009 he worked with Smith as post-doctoral research fellow in Buffalo.

Barry Smith is Distinguished Professor of Philosophy at the University of Buffalo and Director of the National Center for Ontological Research.

Andrew Spear is Associate Professor of Philosophy at Grand Valley State University in Allendale, Michigan. Spear worked with Smith in the institute for Formal Ontology and Medical Information Science (IFOMIS) in Saarbrücken, Germany and received his PhD from the University at Buffalo in 2009.