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   Nota di contenuto   Title Page; Preface; Contents; List of Figures; Introduction; Ontologies
                    and the Semantic Web; Description Logics; What is a Rule?; Aims and
                    Objectives; Guide to the Reader; Basic Definitions; First-Order Logic
                    with Equality; Semantic Correspondences between Logical Theories;
                    Computational Complexity; Introduction to Description Logics; The
                    Description Logic SROIQ; Syntax; Semantics and Inferencing;
                    Simplifications and Normal Forms; Relationship of DLs to Other Logics;
                    Description Logic Nomenclature; Combining Description Logics with
                    Datalog; Datalog as a First-Order Rule Language
                    Syntax of DatalogSemantics of Datalog; Equality; Datalog cup
                    Description Logics: SWRL; Defining SWRL; Reasoning in SWRL;
                    Approaches for Combining Rules and DLs; Rules and Conjunctive
                    Queries; Extending Description Logics with Role Constructors;
                    Introducing Role Expressions; Role Expressions for SROIQ and SHOIQ;
                    Safe Role Expressions for SHIQ; A Tractable DL with Role Expressions;
                    Summary; Related Work; Horn Logic Fragments of Description Logics; A
                    Horn Fragment of SROIQ; A Light-Weight Horn-DL: Horn-FL0; PSpace-
                    Complete Horn DLs: From Horn-FL- to Horn-FLOH-; Hardness;
                    Containment
                    Horn-SHIQ and Other ExpTime-Complete Horn DLsAlternating Turing
                    Machines; Simulating ATMs in Horn-FLE; Summary; Related Work; The
                    Datalog Fragment of Description Logic; Initial Considerations and
                    Problem Definition; The Datalog Fragment of ALC; Defining Description
                    Logic Programs; Emulating DLP in Datalog; Model Constructions for

Sommario/riassunto	Ontological modelling today is applied in many areas of science and technology,including the Semantic Web. The W3C standard OWL defines one of the most important ontology languages based on the semantics of description logics. An alternative is to use rule languages in knowledge modelling, as proposed in the W3C's RIF standard. So far, it has often been unclear how to combine both technologies without sacrificing essential computational properties. This book explains this problem and presents new solutions that have recently been proposed. Extensive introductory chapters provide the necessary