

and under the pressure of social and economic demands (e.g., the development of the schema.org vocabulary).<sup>6</sup> And the growth of the Linked Data Cloud<sup>7</sup> has resulted in many billions of objects and their relations becoming available online, using shared syntax and vocabularies.

### 1.1.7 Where We Are Now

When compared with the situation at the publication of the first edition of this Semantic Web Primer, in 2003, many of the building blocks are now in place. There is rapidly maturing technology to support all phases of deployment of Semantic Web technology, and the number of substantial adoptions, both in commercial and public organizations, is growing rapidly. However, major challenges remain, such as dealing with the ever-increasing scale, lowering the barrier of adoption, and of course fighting that omnipresent bane of information systems: semantic heterogeneity.

## 1.2 Semantic Web Technologies

### 1.2.1 Explicit Metadata

Currently, web content is formatted for human readers rather than programs. HTML is the predominant language in which web pages are written (directly or using tools). A portion of a typical web page of a physical therapist might look like this:

```
<h1>Agilitas Physiotherapy Centre</h1>
```

Welcome to the Agilitas Physiotherapy Centre home page.

Do you feel pain? Have you had an injury? Let our staff

Lisa Davenport, Kelly Townsend (our lovely secretary)

and Steve Matthews take care of your body and soul.

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<sup>6</sup> <http://schema.org>.

<sup>7</sup> <http://linkeddata.org>.