An Open Knowledge Environment: Technical Requirements and Conformance Metrics

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An Open Knowledge Environment (OKE) supports four open knowledge-based activities: (1) interactive, participatory knowledge production, (2) knowledge distribution and sharing, (3) open collaboration and use, and (4) storage, curation, and preservation. These four activities can be provided with existing web-based systems, services, and tools. In addition, current and emerging system development practices permit an OKE implementation to keep up with changing hardware and software products, operational procedures, and organizational practices.

The technical requirements of an OKE are specified in terms of observable system and service functions and behaviors. These functions and behaviors are specified with simple use scenarios. These scenarios provide observable measures that are used to describe a set of OKE conformance metrics. These metrics, in turn, help guide OKE implementations, and facilitate the engineering trade-offs required to put an OKE into operation.

These OKE technical requirements and conformance metrics are described and illustrated using existing, operational, digital library and document portal systems.