



simpli-city

The Road User Information System Of The Future

Informal Deliverable: Abbreviations and Glossary

Contributing Partners: TUV, ASC, TIE, TUDA, IBM, FGM, TALK, WORLD, CRF, SRM

Dissemination Level: Public

Version 1.00

This document serves as a supplement to the SIMPLI-CITY deliverables and provides a list of abbreviations as well as the SIMPLI-CITY glossary.



Document Status	
Lead	Stefan Schulte, TU Vienna
Type	Informal Deliverable

Document History	
Draft Version	V0.10, TUV, 27.02.2013
Contributions	V0.20, CRF, 23.04.2013
	V0.30, TIE, TUV, 25.04.2013
	V0.31, TALK, 28.05.2013
	V0.32, TUDA, TUV, TALK, 14.06.2013
	V0.33, ASC, 30.07.2013
	V0.34, SRM, 23.08.2013
	V0.35, TUV, 01.09.2013
	V0.36, ASC, TUV, 13.09.2013
	V0.37, CRF, TUV, 25.09.2013
	V0.38, ATOS, 03.10.2013
	V0.39, CRF, 07.10.2013
	V0.40, TUV; 08.10.2013
	V0.42, TUV, 11.10.2013
	V0.43, TUV, 23.01.2014
	V0.44, SRM, 26.03.2014
	V0.45, CRF, 15.04.2014
	V0.46, TUV, 26.06.2014
V0.47, TUV, 21.04.2015	
V0.48, TIE, 28-09-2015	
V1.00, TUV, 31.10.2015	

Disclaimer

The views represented in this document only reflect the views of the authors and not the views of the European Union. The European Union is not liable for any use that may be made of the information contained in this document.

Furthermore, the information is provided “as is” and no guarantee or warranty is given that the information is fit for any particular purpose. The user of the information uses it at its sole risk and liability.

Supplement_Glossary_and_Abbreviationsv1.00.docx	Document Version: 1.00	Date: 2015-10-31	Page: 2 / 16
http://www.simpli-city.eu/	Copyright © SIMPLI-CITY Project Consortium. All Rights Reserved. Grant Agreement No.: 318201		

Project Partners



Vienna University of Technology (Coordinator),
Austria



Ascora GmbH, Germany



TIE Nederland B.V., The Netherlands



Technische Universität Darmstadt, Germany



IBM Research Smarter Cities Technology
Centre, Ireland



Forschungsgesellschaft Mobilität, Austria



Talkamatic AB, Sweden



Worldline, Spain



Centro Ricerche FIAT, Italy



SRM – Reti e Mobilità, Italy

Table of Contents

1	Introduction	5
1.1	SIMPLI-CITY Project Overview	5
1.2	Document Purpose, Scope and Context	6
1.3	Document Status and Target Audience	6
1.4	Document Structure.....	6
2	Glossary.....	7
3	Table of Abbreviations	9
3.1	Short Names of the Project Partners	9
3.2	General Abbreviations	9

1 Introduction

SIMPLI-CITY – The Road User Information System of the Future – is a project funded by the Seventh Framework Programme of the European Commission under Grant Agreement No. 318201. It provides the technological foundation for bringing the “App Revolution” to road users by facilitating data integration, service development, and end user interaction.

Within this informal deliverable, which is a supplement to the SIMPLI-CITY deliverables, a definition of common terms and roles related to the realization of SIMPLI-CITY as well as a list of abbreviations and short names is provided.

1.1 SIMPLI-CITY Project Overview

Analogously to the “App Revolution”, SIMPLI-CITY adds a “software layer” to the hardware-driven “product” mobility. SIMPLI-CITY will take advantage of the great success of mobile apps that are currently being provided for systems such as Android, iOS, or Windows Phone. These apps have created new opportunities and even business models by making it possible for developers to produce new apps on top of the mobile device infrastructure. Many of the most advanced and innovative apps have been developed by players formerly not involved in the mobile software market. Hence, SIMPLI-CITY will support third party developers to efficiently realise and sell their mobility-related service and app ideas by a range of methods and tools, including the Mobility Services and App Marketplaces.

In order to foster the wide usage of those services, a holistic framework is needed which structures and bundles potential services that could deliver data from various sources to road user information systems. SIMPLI-CITY will provide such a framework by facilitating the following main project results:

- **Mobility Service Framework:** A next-generation European Wide Service Platform (EWSP) allowing the creation of mobility-related services as well as the creation of corresponding apps. This will enable third party providers to produce a wide range of interoperable, value-added services, and apps for drivers and other road users.
- **Mobility-related Data as a Service:** The integration of various, heterogeneous data sources like sensors, cooperative systems, telematics, open data repositories, people-centric sensing, and media data streams, which can modeled, accessed, and integrated in a unified way.
- **Personal Mobility Assistant:** An end user assistant that allows road users to make use of the information provided by apps and to interact with them in a non-distracting way – based on a speech recognition approach. New apps can be integrated into the Personal Mobility Assistant in order to extend its functionalities for individual needs.

To achieve its goals, SIMPLI-CITY conducts original research and applies technologies from the fields of Ubiquitous Computing, Big Data, Media Streaming, the Semantic Web, the Internet of Things, the Internet of Services, and Human-Computer Interaction. For more information, please refer to the project Website at <http://www.simpli-city.eu>.

Supplement_Glossary_and_Abbreviationsv1.00.docx	Document Version: 1.00	Date: 2015-10-31	Page: 5 / 16
http://www.simpli-city.eu/		Copyright © SIMPLI-CITY Project Consortium. All Rights Reserved. Grant Agreement No.: 318201	

1.2 Document Purpose, Scope and Context

The purpose of this document is to provide the reader of the SIMPLI-CITY deliverables with a quick reference to SIMPLI-CITY abbreviations as well as a glossary of common terms and roles.

1.3 Document Status and Target Audience

This document is listed as “public”, as it contains information helpful for the understanding of the SIMPLI-CITY deliverables. Therefore, it is useful for all readers of SIMPLI-CITY project deliverables.

1.4 Document Structure

This document is broken down into the following sections:

Section 1 provides an introduction to this document including a general overview of the project, and outlines the purpose, scope, context, status, and target audience of this document.

Section 2 contains the SIMPLI-CITY glossary, i.e., a collection of role and term definitions related to the realization of SIMPLI-CITY.

Section 3 provides a table of abbreviations which can be used by the readers of SIMPLI-CITY project deliverables.

Supplement_Glossary_and_Abbreviationsv1.00.docx	Document Version: 1.00	Date: 2015-10-31	Page: 6 / 16
http://www.simpli-city.eu/	Copyright © SIMPLI-CITY Project Consortium. All Rights Reserved. Grant Agreement No.: 318201		

2 Glossary

App: In SIMPLI-CITY, a (mobile) App is software running on a mobile device, very often as part of the Personal Mobility Assistant. A SIMPLI-CITY-enabled App makes use of one or more Backend Services running in the SIMPLI-CITY Mobility Services Framework. The App provides the means to interact with the user through a user interface.

App Marketplace: The SIMPLI-CITY App Marketplace (Mobility Application Marketplace) provides end user Apps analogue to well-known App markets such as Apple AppStore, Google Play, or Windows Phone Store. It provides the means to buy, download, and install offered apps as part of the Personal Mobility Assistant.

Application: In contrast to an App, an Application has a more general and not necessarily software-related meaning.

Backend Service: In SIMPLI-CITY, a Backend Service is defined as a (Web) service accessible through the Internet or some other network (“External Backend Service”), or deployed in the SIMPLI-CITY Service Runtime Environment (“Internal Backend Service”).

Bucket: A bucket is an isolated storage space managing data. A bucket may contain multiple data entries, which may be added, received, updated or deleted. A bucket can be compared to a folder in a file system or a collection in a document-oriented (*semi-structured*) data management system. In SIMPLI-CITY, each component may create multiple buckets for data storage, which are fully separated and not influenced by activities of other buckets. The bucket concept allows the usage of different storage backends by defining a bucket type in order to support different types of data storage.

Bucket Type: A bucket type defines the nature of a bucket. For example, the nature of a bucket can be to hold binary files (binary bucket type), to manage semantic data (semantic bucket type) or to hold (semi-structure (sometimes called “document-oriented”) data (NoSQL bucket type). Bucket types allow components to select the optimal storage type for their needs.

CoBrA: Stands for Context Broker Architecture, which is an agent based architecture for supporting context-aware computing in so-called intelligent spaces, i.e. (living rooms, vehicles, offices or meeting rooms).

Data Service: A Data Service is a service providing access to any kind of data source, e.g., sensor data, user-centric data, open data, or media data streams.

Manifest: In SIMPLI-CITY, a manifest is a technical and machine-readable description of an App or a Backend Service. It describes functionalities and requirements of that App or Backend Service.

Mobile Service: A Backend or Data Service that is invoked by a mobile device, e.g., through an App, is defined as a Mobile Service. Mobile Services should not be confused with Mobility-related Services.

Mobility-related Service: A Mobility-related Service is a service that assists human mobility, e.g., by providing driving assistance service, transport service, etc.

Multimodality: The ability of a system to receive input and give output in more than one modality. Examples of modalities are speech, graphics, text, haptics, non-speech sounds etc. In SIMPLI-CITY, the primary modalities will be speech and text-based menus with a touch interface.

Supplement_Glossary_and_Abbreviationsv1.00.docx	Document Version: 1.00	Date: 2015-10-31	Page: 7 / 16
http://www.simpli-city.eu/		Copyright © SIMPLI-CITY Project Consortium. All Rights Reserved. Grant Agreement No.: 318201	

Personal Mobility Assistant (PMA): The PMA is a full-fledged, voice-based multimodal end user interface as well as runtime environment that allows the execution of arbitrary, SIMPLI-CITY-facilitated apps. It will operate on mobile devices, such as smartphones or tablets.

RSA: An encryption algorithm named after Rivest, Shamir und Adleman for asymmetric encryption of data.

Service Marketplace: In SIMPLI-CITY, the Mobility Service Marketplace will offer service developers the opportunity to offer their services for re-use and integration by other parties. As services aim at software developers, the Service Marketplace will present technological information about a service's functionalities, including details such as offered operations and how to invoke them.

3 Table of Abbreviations

3.1 Short Names of the Project Partners

ASC	Ascora GmbH
CRF	Centro Ricerche Fiat SCPA
FGM	Forschungsgesellschaft Mobilität – Austrian Mobility Research FGM-AMOR gemeinnützige GmbH
IBM	IBM Ireland Product Distribution Limited
SRM	SOCIETA RETI E MOBILITÀ SRL
TALK	Talkamatic AB
WORLD	Atos Worldline Spain, S.A.
TIE	TIE Nederland B.V.
TUDA	Technische Universität Darmstadt
TUV	Vienna University of Technology
ATOS	Atos Spain SA (third party linked to WORLD)

3.2 General Abbreviations

ACID	Atomicity, Consistency, Isolation, Durability
ACL	Access Control List
ADT	Android Developer Tools
AES	Advanced Encryption Standard
AGPL	GNU Affero General Public License
AH	Authentication Header
AI	Artificial Intelligence
AIDL	Android Interface Definition Language
AM	Amplitude Modulation
AMQM	Advanced Message Queuing Protocol
ANSI	American National Standards Institute
API	Application Programming Interface
APT	Advanced Packing Tool
ARE	Application Runtime Environment
ASR	Automatic Speech Recognition
ATM	Automated Teller Machine
AVM	Automatic Vehicle Monitoring

BCD	Binary-coded Decimal
BGIS	Bologna Geographic Information System
BI	Business Intelligence
BNF	Backus-Naur Form
BoP	Board of Partners
BSD	Berkeley Software Distribution
CA	Consortium Agreement
CAI	Commonly Agreed Interface
CAN bus	Controller Area Network bus
CARB	California Air Resources Board
CCMC	CEN-CENELEC Management Centre
CEN	European Committee for Standardization
CEN-WS	CEN Workshop
CENELEC	European Committee for Electrotechnical Standardization
CISIUM	Central Integration and Supervision for Information on Urban Mobility
CMMI	Capability Maturity Model Integration
CNG	Compressed Natural Gas
CoBrA	Context Broker Architecture
CPU	Central Processing Unit
CRC	Cyclic Redundancy Check
CRUD	Create, Read, Update, Delete
CSA	Coordination and Support Action
CSS	Cascading Style Sheets
CSV	Comma-Separated Values
CWA	CEN Workshop Agreement
DBMS	Database Management System
DDD	Dialogue Domain Descriptions
DDoS	Distributed Denial of Service
DME	Dialogue Move Engine
DNS	Domain Name System
DoS	Denial of Service
DoW	Description of Work
DLC	Data Length Code
DTO	Data Transfer Object

EC	European Commission
ECU	Electronic Control Unit
EDE	Enhancing the Driver Experience
EDI	Electronic Data Interchange
EEC	European Economic Community
EDDP	European Directive on Data Protection
EFTA	European Free Trade Association
EGE	European Group on Ethics in Science and New Technologies
EPA	Environmental Protection Agency
ES	European Studies
ESB	Enterprise Service Bus
ESP	Encapsulating Security Payload
ESRI	Environmental Systems Research Institute
ETA	Estimated Time of Arrival
ETSI	European Telecommunications Standards Institute
EU	European Union
EV	Electric Vehicle
EWSP	European Wide Service Platform
EXI	Efficient XML Interchange
FDPA	Federal Data Protection Act
FI-PPP	Future Internet Public-Private Partnership Programme
FIA	Future Internet Assembly
FIFO	First In, First Out
FIR	Finite Impulse Response
FM	Frequency Modulation
FP7	Framework Programme 7
FSIGN	Financial Statement Authorised Signatory
GCM	Google Cloud Messaging
GF	Grammatical Framework
GIS	Geographic Information System
GPL	GNU General Public License
GPS	Global Positioning System
GTFS	General Transit Feed Specification
GUI	Graphical User Interface

HMI	Human-Machine Interface, Human Machine Interaction
HTML	HyperText Markup Language
HTTP	Hypertext Transfer Protocol
IaaS	Infrastructure-as-a-Service
IBM WAS	IBM WebSphere Application Server
ICT	Information and Communications Technology
ID	Identifier
IDE	Integrated Development Environment
IP (1)	Integrated Project
IP (2)	Intellectual Properties
IPC	Inter Process Communication
IPR	Intellectual Property Rights
IRI	Internationalized Resource Identifier
ISO	International Organization for Standardization
ISS	IBM InfoSphere Streams
IT	Information Technology
ITS (1)	Intelligent Transportation Systems
ITS (2)	Infrastructure Technology Systems
IVI	In-Vehicle Infotainment
JAR	Java Archive
JMS	Java Message Service
JMX	Java Management Extension Technology
JNDI	Java Naming and Directory Interface
JSON	JavaScript Object Notation
JVM	Java Virtual Machine
KML	Keyhole Markup Language
LDAP	Lightweight Directory Access Protocol
LGPL	GNU Lesser General Public License
LTA	Limited Traffic Area
LTE	Long Term Evolution
LTZ	Limited Traffic Zone
L2F	Layer 2 Forwarding
L2TP	Layer 2 Tunneling Protocol
MDaaS	Mobility-related Data as a Service

MMDI	Multimodal Dialogue Interface
MML	Mobility Mediation Layer
MoU	Memorandum of Understanding
MPTCP	Multiple Path TCP
MQTT	Message Queuing Telemetry Transport
MTM	Mobile Trusted Module
MVC	Model View Controller
NESSI	Networked European Software and Services Initiative
NFC	Near Field Communication
NIST	National Institute of Standards and Technology
NLP	Natural Language Processing
NLTK	Natural Language Tool Kit
NoSQL	Not only Structured Query Language
NRA	National Roads Authority
OBD	On-board Diagnostics
OEM	Original Equipment Manufacturer
ORM	Object Relational Mapper
OS	Operating System
OSAL	Operating System Abstraction Layer
OSGi	Open Services Gateway initiative
OSI	Open Systems Interconnection
OWL	Web Ontology Language
OWL 2 EL	Web Ontology Language with Existential Quantification Restriction
PaaS	Platform-as-a-Service
PDA	Personal Digital Assistant
PDF	Portable Document Format
PERL	Practical Extraction and Reporting Language
PL / SQL	Procedural Language/Structured Query Language
PMA	Personal Mobility Assistant
POI	Point of Interest
POJO	Plain Old Java Object
POM	(Maven) Project Object Model
PPR	Project Progress Report
PPTP	Point-to-Point Tunneling Protocol

PTIME	Polynomial Complexity Time
PTI	Push-To-Initiate
PTT	Push-To-Talk
PUDF	Plan for Use and Dissemination of the Foreground
QMR	Quarterly Management Report
QoE	Quality of Experience
QoS	Quality of Service
RBAC	Role-based Access Control
RDBMS	Relational Database Management System
RDF	Resource Description Framework
RDFS	Resource Description Framework Schema
REST	REpresentational State Transfer
RFC	Request For Comments
RFID	Radio Frequency Identification
RFP	Request For Proposal
RPM	Revolution Per Minute
RSA	Rivest, Shamir und Adleman
RTD	Research, Technology, and Development
RTMP	Real Time Messaging Protocol
S3	(Amazon) Simple Storage Service
SaaS	Software-as-a-Service
SAIL (1)	Sensor Abstraction and Integration Layer
SAIL (2)	Storage and Interface Layer
SAL	Sensor Abstraction Layer
SCATS	Sydney Coordinated Adaptive Traffic System
SDE	Spatial Database Engine
SDK	Software Development Kit
SFTP	SSH File Transfer Protocol
SG	Steering Group
SIRI	Service Interface for Real Time Information
SL4A	Scripting Layer for Android
SLA	Service Level Agreement
SLO	Service Level Objective
SMTP	Simple Mail Transfer Protocol

SOA	Service-oriented Architecture
SOAP	Simple Object Access Protocol
SOC	Service-oriented Computing
SOTA	State of the Art
SQL	Structured Query Language
SRE	Service Runtime Environment
SSH	Secure Shell
SSL	Secure Socket Layer
STOMP	Simple (or Streaming) Text Orientated Messaging Protocol
STREP	Specific Targeted Research Project
STT	Smoothed Travel Time
SUS	System Usability Scale
SVN	Subversion
SWEET	Semantic Web for Earth and Environmental Terminology
SWOT	Strengths, Weaknesses, Opportunities, and Threats
SWP	Speak With the PMA
TC	Technical Committee
TCP	Transmission Control Protocol
TCS	Traffic Control Site
TDM	Talkamatic Dialogue Manager
TLS	Transport Layer Security
TM	Turn Manager
TMC	Traffic Message Channel
TPM	Trusted Platform Module
TPER	Trasporto Passeggeri Emilia-Romagna
TRIPS	Travel-time Reporting Integrated Performance System
TRL	Technical Readiness Level
TSB	TIE SmartBridge
TTS	Text-To-Speech
UC	Use Case
UI	User Interface
UML	Unified Modeling Language
URL	Uniform Resource Locator
UTOPIA	Urban Traffic Optimisation by Integrated Automation

UUID	Universally Unique Identifier
VM	Virtual Machine
VMS	Variable Message Sign
VUI	Voice User Interface
VPN	Virtual Private Network
VUI	Voice-based User Interfaces
W3C	World Wide Web Consortium
WADL	Web Application Description Language
WAR	Web Application Archive
WG	Working Group
WGS	World Geodetic System
wh	Who, where, what, which, how?
WQVGA	Wide Quarter Video Graphics Array
WSDL	Web Service Description Language
WSGI	Web Server Gateway Interface
WSN	Wireless Sensor Network
XML	Extensible Markup Language
XMPP	Extensible Messaging and Presence Protocol
XPath	XML Path Language
XSD	XML Schema Definition
XSS	Cross-Site-Scripting
YAML	YAML Ain't Markup Language (recursive acronym)
6LoPAN	IPv6 for low power personal area networks