DRV GlobalTypes and DRV Request Interface

DRV Data Standard

DRV Deutscher ReiseVerband

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1. Why does the industry need a new data standard?

Criteria for the perfect holiday trip

Every touristic service provider with its own product wants to set itself apart from competitors in the sales systems, placing its product as attractively as possible to boost its bookings. The price is not always the decisive factor for booking a holiday trip: criteria such as furnishings and location of the holiday home and/or services included play an equally important role when making individual holiday decisions.

Old world

So far, all operators have presented their offers using their own criteria and own descriptions. For instance, a room may be designated "Deluxe Double Room" in one catalogue and "Superior Double Room" in another. Physically, both mean the same type of room. Therefore, direct product comparisons are not possible at present. This can change by using GlobalTypes for product descriptions. As GlobalTypes uses standardized codes, it not only enables cross-system information requests, but also ensures that attributes such as "partial sea view" or "close to beach" are always based on the same criteria.

DRV data standard

Use of the new DRV industry standard enables highlighting and communicating operator products with their specific attributes, to better differentiate them from other products. The data standard comprises the DRV GlobalTypes and the DRV Request Interface. As GlobalTypes allows assigning standardized attributes to the products to be searched, the request interface can be used directly by operators but also in cross-operator mode. The standardized offer attributes can be transmitted to sales systems in any data format and requested online using the DRV Request Interface.

Decision is with operators

All attributes of touristic services are defined by operators themselves. Consequently, it is up to the operators to decide how their products are presented in sales systems. GlobalTypes enables sales systems to find offers made by operators that meet the criteria desired by the final customer, without having to resort only to price comparisons.

Overview of advantages

For the first time, operators have the opportunity for a detailed, consistently individual and yet comparable representation of their offers. In stationary sales, customer desires can be especially well tended to and efficient service can be provided; while in online sales better and more detailed representation possibilities are created. Both sales operations and final customers benefit from improved transparency and better comparability of services and prices.

Various target groups can benefit from using the DRV data standard:

Operators	Stationary sales	Online sales	Final customers
• Present offers with all features and additional services in the sales systems • Stand out against competitors • Assign product attributes independently according to operator's quality criteria	• Quick and precise system-supported search at the counter • Improved service quality • Efficient customer service • Improved transparency of offers	• Optimized and precise selection criteria • Improved representation of offers is possible • Higher transparency of offers • Improved comparability of performance and price of offers	• Quick and simple search for perfect personal holiday • Improved servicing of special requests • Improved comparability of performance and price of offers

2. DRV GlobalTypes

What are DRV GlobalTypes?

DRV GlobalTypes are standardized and coded offer attributes of touristic services. Each offer attribute is assigned its own code and is therefore unique. All defined DRV GlobalTypes are classified in various categories for easier assignment (see examples in table below).

Classification into categories

A category designates a certain type of offer attributes and serves to distinguish groups. Each category has a number assigned to it, which is reflected in the codes of most attributes. In some exceptional cases, codes are encoded either purely numerically (GT01, GT09 and GT10), in accordance with ISO 3166-A2 – abbreviations for countries – (GT11) or as three-letter codes for airports (GT15). In some categories a single code (GlobalType) is sufficient, others additionally allow specifying a SubType and/or AdditionalType to provide a more detailed description of a product attribute.

Hierarchy levels

The GlobalTypes concept enables detailed representation by providing three hierarchically structured attribute types applied in many categories. The table below shows what categories exist and in which cases the GlobalType (in short "GT") can be extended by an additional SubType (in short "ST") and/or AdditionalType (in short "AT") for more precise specification of a product:

Categories (status: Feb. 8, 2011)

GlobalType	Category	GT	ST	AT
GT01	Accommodation	X		
GT02	Types of accommodation	X	X	X
GT03	Attributes of accommodation	X	X	X
GT04	Room types	X	X	X
GT05	Room attributes	X	X	X
GT06	Meals	X	X	
GT07	Incentives	X	X	
GT08	Additional services	X	X	X
GT09	Location codes	X		
GT10	Regional codes	X		
GT11	Country codes	X		
GT12	Hotel chains	X		
GT13	Locations of room	X		X
GT14	Transfer	X	X	X
GT15	Airports	X		
GT16	Sales channels	X		
GT17	Flight classes	X		
GT18	Modes of payment	X	X	

A GlobalType (GT) refers to a code for a main feature and can be used in various ways:

• Alone

• With an ST from the same category

• With an AT from the same category

• With an ST and an AT from the same category

A SubType (ST) is used to specify a GlobalType more precisely. A SubType can never be used alone but is always used in connection with a GlobalType from the same category. SubTypes are not automatically assigned to a certain GlobalType. Many SubTypes can be semantically assigned to various GlobalTypes. Each SubType can theoretically be assigned to each GlobalType within a category. Several SubTypes can be assigned to one GlobalType. A SubType can be used:

• with a GT from the same category

• with a GT and an AT from the same category

An AdditionalType (AT) is additional information provided with a GlobalType and/or SubType. ATs can be assigned to all GlobalTypes and SubTypes within a category of GlobalTypes. AdditionalTypes cannot be used independently because they are not meaningful as such. An AdditionalType can be used:

• with a GT from the same category

• with a GT and an ST from the same category

A GlobalType, a SubType and an AdditionalType always belong to exactly one category. They cannot be combined across categories.

Example of hierarchy levels

Code	Meaning of code	General meaning
GT03-MASS	Massage	Massage(s) is/are available at the accommodation
GT03-MASS	Massage	Thai massage(s) is/are available at the accommodation
ST03-THMA	Thai massage	
GT03-MASS	Massage	Thai massage(s) is/are available at the accommodation for a charge
ST03-THMA	Thai massage	
AT03-EXCO	Subject to charge	

Use of GlobalTypes

The coded offer attributes can be integrated into each file format. The standard can be transmitted directly to the sales systems through the file formats or requested online via the DRV Request Interface.

GlobalType Center

The GlobalType Center is an online application that enables system-supported maintenance of the GlobalTypes while the system is in operation. Downloads enabling access to the most recent GlobalType lists are available for all licensed operators and sales system. Moreover, there are functions to issue requests for change and/or new setup.

3.   DRV Request Interface

The standardized DRV Request Interface supports product searches on the basis of DRV GlobalTypes, and therefore enables requests for touristic products. The information contained in the returns creates true comparability of the various products and highlight the quality features of each operator.

Use of the DRV interface

The interface was formulated for requests for the product types Package, Hotel, Flight, Additional Services and the resulting round and modular trips. The products returned by the operator system to the sales system issuing the request contain all necessary information to allow actually booking the product. The appropriate data structures for "request" and "response" are defined for each category in the interface.

Methods

The interface enables classic request processes of existing sales systems (e.g. regional lists, hotel lists, date lists). In addition, further methods were defined to enable support of novel requests (offer matrix, offer calendar, etc.). This will allow serving novel, innovative front-ends. The methods were purposefully formulated to be non-specific to product type, thus enabling requests across product types. For this reason, the product type must always be transferred as a parameter of the request.

Method	Description
getAvailableValues	Provides all dynamic information needed to create a search template, e.g. possible operators, possible travel dates, possible product groups
getProductGroups	Provides a list of possible product groups, in each case with the best offer within a group (e.g. regional list)
getProductList	Provides a product list with the best-priced offer for the product (e.g. a hotel list)
getProductOffers	Provides a list of concrete offers for one or more products (e.g. a list of dates)
getProductVariants	Provides a concrete (best-priced) product for a submitted offer attribute (e.g. room, operator, number of days, meals) for all possible variants of this attribute (e.g. one product for each possible departure airport)
getProductMatrix	Similar to the getProductVariants method, but in this case two attributes are submitted. A concrete (best-priced) product is returned for each combination of the two attribute v ariants, so that a two-dimensional matrix is created. Example: room/meal matrix
getAlternativeProducts	Offers two possibilities: a/ provides alternative products to a submitted product b/ returns alternatives if a ProductListRequest returns no results because of the parameters specified. In this case the return also contains information that the original parameter could not take into account.
getMoreData	If a client received a MoreDataToken in a previous response due to the requested system being unable to provide data in good time, another request can be sent to the system with this method and the token to effect "subsequent delivery" of information.

Format of DRV interface

The request interface is a SOAP (Simple Object Access Protocol) web service and formulation is accordingly done in a WSDL (Web Services Description Language) file. The data structures used by the interface for "Request" and "Response" are formulated in XSD files (XML Schema Definition) and are included within the WSDL. Both formats are XML-based and consequently independent of platforms, protocols and programming languages.

Data structure

The definition of the data structures is spread among several XML Schema files. This makes it easy to develop appropriate client applications, because advanced programming languages (e.g. Java or .Net-based languages) provide tools that can directly generate the appropriate source code from such Schema files.

Licensing

DRV GlobalTypes and the DRV Request Interface are the property of the German Travel Association (Deutscher ReiseVerband, DRV). Utilization is subject to authorization and licensing by DRV's service subsidiary, DRV Service GmbH.

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Legal

Licensees are fully responsible for the correct and purposeful use of GlobalTypes. DRV assumes no liability for correct assignment of GlobalTypes or correct usage of the request interface.