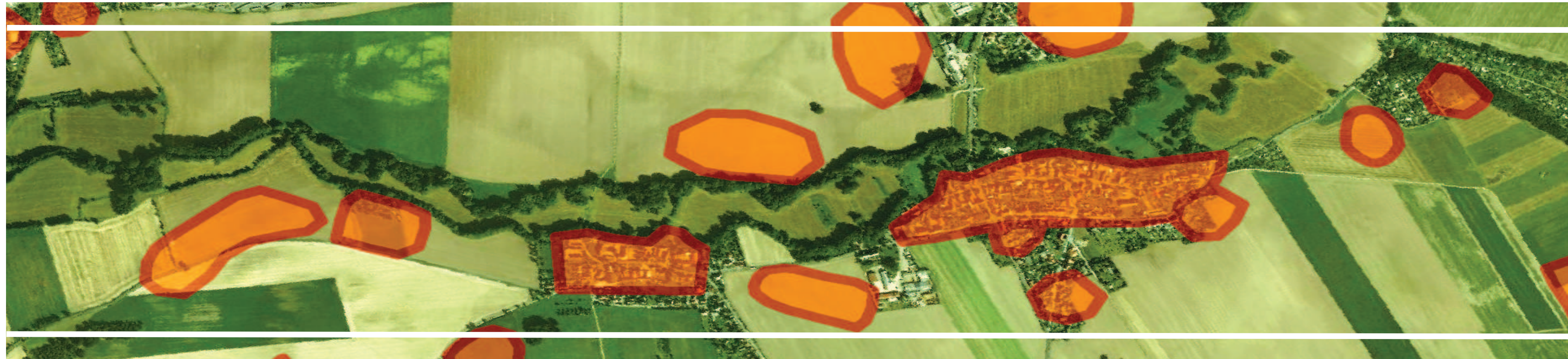


# ADeX for Protected Sites – Steps towards Standardisation in German Heritage



ADeX is an "Archaeological Data eXport standard" initiated and developed by the commission "Archaeology and Information Systems" of the Association of State Archaeologists in Germany. The Motivation is described as follows [ADeX-Info]:  
 "Today's boundaries often cut through culturally homogeneous landscapes of the past. That's why archaeological research cannot stop at state borders and also heritage protection benefits from cross border views. Because every state of Germany is culturally independent, we find a very differentiated situation of data models for archaeological information. So the exchange of archaeological information within Germany and externally is not easy at all.  
 Authorities of archaeological heritage protection are more and more required to open their data to the public. Initiatives like INSPIRE and GDI-DE aim at improved and smooth information exchange. Currently, many organizational and technical standards and specifications are developed in this context, and these will be binding to public administration. The list of topics, that have to be implemented first, includes for instance 'protected sites'."

Within ADeX three different types of "areas" are defined (which are used as neutral analogies of a broad variety of terms) [ADeX-Info]:

- Investigation Areas → "areas, that were surveyed or investigated by archaeological means."
- Archaeological Areas → "areas, where at least one relevant archaeological result is present or is assumed."
- Protection Areas → "areas, that are legally protected for archaeological reasons or are prepared for this."

ADeX has a modular basis and contains a core set of attributes. Two tables in CSV format are used to transfer the data.

### Data Table

"The data table consists of one dataset per Archaeological Area. There are three groups of attributes (modules):

- General, e.g. ADeX identifier, responsible institution, kind of area, data source, authorization information.
- Georeference, e.g. coordinates, reference system, precision, municipality.
- Type and dating. Broader terms from a list of approved terms are used to describe the type and the dating. Narrower terms are not standardized and depend on the different thesauri of the institution providing the data." [ADeX-Info]

### Explanation Table

"The explanation table contains a list of terms and their explanations. Each term used within a field of the data table can be annotated in the explanation table." [ADeX-Info]

Because of some fears of leaking data it is important to clearly explain some facts:

- \* ADeX is only an interface description (a data format) to support technical issues of data exchange.
- \* ADeX doesn't influence selections of the existing data due to designated use cases!
- \* ADeX doesn't affect any access rules and conditions of use!
- \* ADeX doesn't collect any data!

So the institution owning the data keeps full control on its data.

The current version 2.0 of ADeX only addresses "Archaeological Areas". "Protection Areas" and "Investigation Areas" are supposed to be integrated in further versions ("Version 2.0 des ADeX-Standards

bezieht sich vorerst nur auf Archäologieflächen, Schutz- und Untersuchungsflächen sollen in spätere Versionen integriert werden." [Documentation ADeX Version 2.0, p. 8]). Nevertheless, because of its modular concept ADeX is extendible for "Protection Areas" in an easy way. The existing modules "General" and "Georeference" can be used and should be extended by a new module "Protection" (→ Fig. 1).

The suggested Attributes (→ Fig. 2) for this new module are a mix of attributes used at the institutions having the data, attributes requested by INSPIRE and some demands of an agreement of the Association of State Archaeologists in Germany [Dresden Consensus]. The main idea is to reduce problems that may arise from the different legal situation in various states of Germany:

- The local character of the data and the limited region of validity shall be accentuated.
- The responsibility shall be clearly declared.
- The corresponding monuments preservation act shall be indicated for each object.

Because of different law and because of different protection objectives we find many different types of "Protection Areas" in practice. So it is very important to include a clear description of the individual type of each "Protection Area". It is suggested to use a controlled vocabulary at one hand and individual free text at the other hand for this description.

With another little opening of the current ADeX standard it would be possible to provide archaeological data not only as file but also as web service. Many web applications base on these technology nowadays and ADeX would be able to support web portals like INSPIRE or EUROPEANA. A possible INSPIRE interface is shown in Figure 3 and 4. Most attributes come from the module "Protection", the others can be derived from the modules "General". The geometry has to be provided as web service too, such as WMS or WFS.

The introduction of "Protection Areas" into ADeX would enable a harmonised view on concerns of archaeological heritage protection. Because there is no decision of the concerned working group on the further development of ADeX, this paper has to be considered as suggestion.

### References

- [ADeX-Info] [http://www.landesarchaeologen.de/fileadmin/Dokumente/Dokumente\\_Kommissionen/Dokumente\\_Archaeologie-Informationssysteme/Dokumente\\_AIS\\_ADeX/ADeX-Poster\\_en.pdf](http://www.landesarchaeologen.de/fileadmin/Dokumente/Dokumente_Kommissionen/Dokumente_Archaeologie-Informationssysteme/Dokumente_AIS_ADeX/ADeX-Poster_en.pdf).
- [Documentation ADeX Version 2.0] [http://www.landesarchaeologen.de/fileadmin/Dokumente/Dokumente\\_Kommissionen/Dokumente\\_Archaeologie-Informationssysteme/Dokumente\\_AIS\\_ADeX/ADeX\\_2-0\\_Doku.pdf](http://www.landesarchaeologen.de/fileadmin/Dokumente/Dokumente_Kommissionen/Dokumente_Archaeologie-Informationssysteme/Dokumente_AIS_ADeX/ADeX_2-0_Doku.pdf).
- [Dresden Consensus] [http://www.landesarchaeologen.de/fileadmin/Dokumente/Dokumente\\_Kommissionen/Dokumente\\_Archaeologie-Informationssysteme/Dokumente\\_AIS\\_Rechte/Meinungsbild\\_Arch%C3%A4ologie-INSPIRE-Schutzgebiete.pdf](http://www.landesarchaeologen.de/fileadmin/Dokumente/Dokumente_Kommissionen/Dokumente_Archaeologie-Informationssysteme/Dokumente_AIS_Rechte/Meinungsbild_Arch%C3%A4ologie-INSPIRE-Schutzgebiete.pdf).
- ATKIS-DOP (RGB) Digital RGB Orthophoto. Online as geographic data service: [http://www.landesvermessung.sachsen.de/ias/basiskarte4/service/SRV4ADV\\_P\\_DOPRGB/WMSFREE\\_TK/wmsservice](http://www.landesvermessung.sachsen.de/ias/basiskarte4/service/SRV4ADV_P_DOPRGB/WMSFREE_TK/wmsservice). © Staatsbetrieb Geobasisinformation und Vermessung Sachsen.

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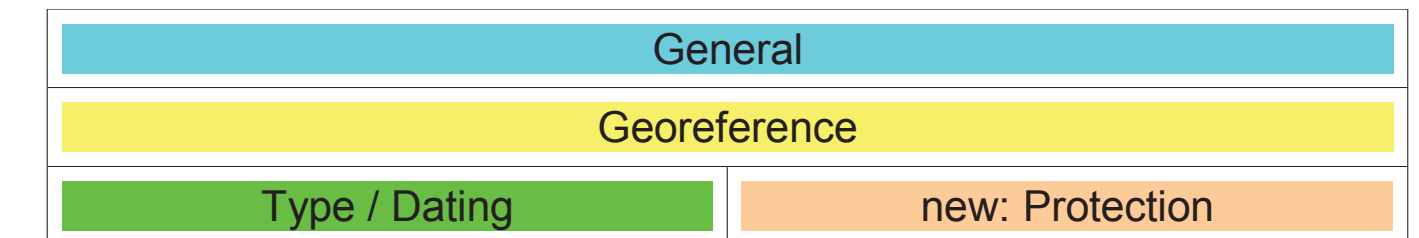


Fig. 1 – Suggested structure of ADeX modules.

Attributes	Description	Standard	INSPIRE
GRUEND_DAT	legal foundation date	opt.	oblig.
GRUEND_DOK	legal foundation document	oblig. **	oblig.
TYP_SCHEMA	type designation scheme	oblig.	oblig.
SCHUTZ_TYP	type designation	oblig.	oblig.
TYP_ANTEIL	percentage of type	---	oblig.
SCHUTZ_TP2	individual type description	opt.	---
SCHUTZ_KL	protection classification	---	oblig.
GELTUNGSB	region of validity	oblig. **	opt.
SCHUTZ_BES	description of protection	opt.	opt.
VERANTW_ST	responsible institution	opt.	opt.
ERHALTUNG	conservation status	opt.	---

Fig. 2 – Suggested Attributes for modul „Protection“. (\*\* attributes regarding demands of the [Dresden Consensus])

INSPIRE Protected Sites Simple:: ProtectedSite	ADeX
+ geometry: GM_Object	Georeference (extended by web services)
+ inspireID: Identifier	derived from ADeX_ID
+ applicationSchema: ApplicationSchemaValue	"simple" or "full"
+ legalFoundationDate: DateTime	GRUEND_DAT
+ legalFoundationDocument: CI_Citation	GRUEND_DOK
+ siteDesignation: DesignationType designationScheme designation, percentageUnderDesignation	TYP_SCHEMA SCHUTZ_TYP TYP_ANTEIL
+ siteName: GeographicalName	BEZEICHNG
+ siteProtectionClassification: ProtectionClassificationValue	SCHUTZ_KL

Fig. 3 – Suggested support of INSPIRE: the „simple application scheme“ for protected sites.

INSPIRE Protected Sites Full:: ProtectedSite	ADeX
+ sitelIdentifier: SitelIdentifierType	ADeX_ID
+ siteDescription: LocalisedCharacterString	GELTUNGSB, maybe SCHUTZ_BES
+ dataSource: CharacterString	DAT_QUELLE
+ responsibleAgencyName: LocalisedCharacterString	VERANTW_ST
all other attributes	not supported yet

Fig. 4 – Suggested support of INSPIRE: the "full application scheme" for protected sites.