



Product Component

DEFINITION			
<i>Name</i>	ESRI ArcGIS for Desktop		
<i>Description</i>	A scalable line of desktop GIS and mapping software. ArcGIS for Desktop is available in three license levels: Basic, Standard, and Advanced (formerly ArcView, ArcEditor, and Arc Info, respectively). It is a comprehensive GIS software that can perform mapping, geographic data creation, editing, management, integration, and analysis. ArcGIS is built using ArcObjects, which is based on Microsoft's Component Object Model (COM) that allows for extensive software customization.		
<i>Rationale</i>	<ul style="list-style-type: none"> • ESRI is a de facto state standard for GIS software (124 cities, 111 counties, 114 regional agencies, and most state agencies). • ESRI is the only GIS company on state contract. • Currently operating successfully within state infrastructure. • Meets the Geospatial Metadata criteria defined within Missouri Adaptive Enterprise Architecture (MAEA). • Industry leader in Geographic Information Systems. • State educational institutions commonly use these products in their training and education programs. 		
<i>Benefits</i>	<p>The benefits of adopting a single suite of GIS software are that it:</p> <ul style="list-style-type: none"> • Allows for the development of applications and database components that can be shared between systems. • Allows for combined training costs. • Allows for increased purchasing and negotiation power with the vendor for training, software, and services. <p>Documenting this software suite within the MAEA will:</p> <ul style="list-style-type: none"> • Provide guidance and direction to local government in evaluating the utility of this software to their situation. • Aid in the coordination of statewide data development protocols. 		
ASSOCIATED ARCHITECTURE LEVELS			
<i>Specify the Domain Name</i>	Information		
<i>Specify the Discipline Name</i>	Geographic Information Technology		
<i>Specify the name of the associated Technology Area</i>	Geographic Information Systems		
KEYWORDS			
<i>List Keywords</i>	Geographic Information System (GIS), desktop, software, mapping, Environmental Systems Research Institute (ESRI), ArcGIS, Arc Info, ArcView, geocode, geodatabase, ArcEditor, ArcMap, ArcToolbox, ArcCatalog		
VENDOR INFORMATION			
<i>Vendor Name</i>	ESRI	<i>Website</i>	http://www.esri.com/

<i>Contact Information</i>	<p>State Contract Number: C215017001 http://www.oa.mo.gov/purch/contracts/index.htm Current end date: August 31, 2016</p> <p>ESRI Missouri Branch Office: (636) 949-6620 (St. Louis Office)</p>
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POTENTIAL COMPLIANCE SOURCES

<i>Name</i>	OpenGIS Consortium	<i>Website</i>	http://www.opengeospatial.org/
<i>Contact Information</i>			
<i>Name</i>		<i>Website</i>	
<i>Contact Information</i>			

COMPONENT REVIEW

<i>List Desirable aspects</i>	<p>Data manipulation – Allows integration of many different formats and data models; Allows for connection to popular DBMS; Fairly robust import/export functionality; Excellent projection algorithms; Enhanced editing tools; Good metadata handling and retrieval.</p> <p>Analysis – Geoprocessing tools are good; Analysis functionality in buffering, selection, query, etc.; Good image integration; Good geocoding functions; Geostatistical analysis functions are greatly improving.</p> <p>Extensions – Very robust set of extensions covering many application areas of geospatial processing and analysis (i.e. hydrological, grid, network, COGO, etc.).</p> <p>Cartography – Basic map output functionality; Can create a functional map through the interface but to create a really good map you need to thoroughly understand the depth of the interface; Symbol and font sets are very good; Ability to create transparent layers is good; Thematic data classification and histogram development is good; The development of style sheets is a good idea; Basic map elements (legend, key, north arrow, etc.) are good.</p> <p>Topology – Supports topological relationships with editing, error reporting, and interaction relationships with the use of the geodatabase model.</p> <p>Customization – Allows for customization and development of extensions, etc. within the software; Can be used as an enterprise solution; Interoperable components can be leveraged on data or DBMS side; Can selectively develop GUI based on class of user and application needs.</p> <p>Training / Education – The software vendor has developed a large number of classes, many of which are available within the state; Has a wide variety of training media options (self-study or instructor-led Web, classroom, on-site); ESRI certified trainer program; State GIS Conference and MAGIC Symposium provide opportunities for education and training.</p> <p>User Support – Extensive on-line knowledge base available; Large number of user groups in the state; Large in-state peer-to-peer forum; Help function within ArcGIS or on Web is fairly complete and relatively user friendly.</p> <p>Licensing – Licensing includes an option for concurrent users, allowing fewer licenses to be shared among a large number of users.</p>
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Data manipulation – In the past, data creation and editing tools were not easy to navigate for the novice user. Recent releases of ArcGIS for Desktop now include the ability to set up editing environments for novice users. Tabular data used to require import from other file formats to interact with software rather than using data in its native format, were now MS Excel supported in native format and database connectors work with almost all other DBMS systems; To store geographic data in a database management system (DBMS) the purchase of middleware (i.e. Spatial Database Engine (SDE), etc.) is required MS Access is supported (Personal Geodatabase) and so is MS SQL Server Express without the need to purchase an ArcGIS for Server license (SDE). Report generation is conducted via a wizard but can prove difficult for some users;

Analysis – In the past, location of analysis tools was not easy to locate for the new user. New SEARCH ability makes finding analysis tools very easy.

Some users may need to export data to other applications to complete analysis.

Extensions – Extra cost associated with each extension; Instructor-led training on extensions is limited. Cost for the core desktop product is cheaper because of extensions. Also, some extensions are included with certain license levels at no charge (i.e.: Maplex and ArcScan).

Cartography - Automatic labeling and overposting sequencing does not provide consistent results. Maplex helps with label placement and is now included with all license levels; In Past versions of ArcGIS for Desktop map templates are not so robust. New user-defined map templates can be as complex as you please; No support for multiple map layouts but multiple data frames are supported; For maps with large file sizes you may need to purchase additional software (i.e. ArcPress) to create the hardcopy maps (generally only when imagery is being printed) ArcPress included with all license levels

Topology – Topological model is difficult to set up and maintain. With the development of non-topological object relationships, analysis functions and the output of geospatial analysis needs to be examined thoroughly for sensitivity of the analysis to these relations.

Customization – The programming language base for development has changed over time requiring users to relearn how to customize the interface. But this in order to keep up with current IT trends).

Training / Education – Cost, location, and availability is many times prohibitive to participation. Instructor-led online training now widely available and does not require travel

User Support – ESRI technical support varies to individual contacted.

List Undesirable aspects

Operating System	<ul style="list-style-type: none"> - <u>ArcGIS-</u> Basic, Standard, and Advanced 2003 (SP2), Terminal Services (SP2), 2008 R2 (SP 1), XP 32-bit (SP3), XP 64-bit (SP2) Vista (SP2), Windows 7 32-bit and 64 bit (SP1), Windows 8 32 bit and 64 bit 	Platform	<p><u>ArcGIS-</u> Basic, Standard, and Advanced PC-Intel</p> <p><u>ArcInfo Workstation</u> also supported on Sun (Solaris), HP (HP-UX), IBM (AIX)</p>
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ASSOCIATED COMPLIANCE COMPONENTS

Product

List the Product-specific Compliance Component Names	Visual C++, VB, VBA, .NET and COM
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Configuration Links

List the Configuration-specific Compliance Component Names	
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COMPONENT CLASSIFICATION

Provide the Classification	<input type="checkbox"/> Emerging <input checked="" type="checkbox"/> Current <input type="checkbox"/> Twilight <input type="checkbox"/> Sunset
Sunset Date	

COMPONENT SUB-CLASSIFICATION

Sub-Classification	Date	Additional Sub-Classification Information
<input type="checkbox"/> Technology Watch		
<input type="checkbox"/> Variance		
<input type="checkbox"/> Conditional Use		

RATIONALE FOR COMPONENT CLASSIFICATION

Document the Rationale for Component Classification	The majority of state agencies are currently using the ArcGIS platform as their primary GIS software.
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MIGRATION STRATEGY

Document the Migration Strategy	
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IMPACT POSITION STATEMENT

Document the Position Statement on Impact

AGENCIES

List the Agencies Currently Utilizing this Product

Office of Administration, Dept. of Conservation, Dept. of Economic Development, Dept. of Elementary and Secondary Education, Dept. of Health and Senior Services, Dept. of Higher Education, Dept. of Insurance, Dept. of Labor and Industrial Relations, Dept. of Natural Resources, Dept. of Public Safety, Dept. of Revenue, State Emergency Management Agency, Department of Social Services, Dept. of Transportation

CURRENT STATUS

Provide the Current Status

In Development
 Under Review
 Approved
 Rejected

AUDIT TRAIL

Creation Date

October 20, 2008

Date Approved / Rejected

Reason for Rejection

Last Date Reviewed

Last Date Updated

7/15/2015

Reason for Update