Beyond Mapping Compilation Series

by Joseph K. Berry

*…Beyond Mapping columns appearing in GeoWorld (formally GIS World) magazine from **March 1989** through **December 2013**.*

Most GIS applications have focused on mapping and spatial data management for viewing and geo-query of mapped data. Map analysis and GIS modeling involve entirely new spatial reasoning concepts and procedures that are not reflected in our paper map legacy. The four books in the Beyond Mapping Compilation Series are based on Joe Berry's popular "Beyond Mapping" columns in GIS World/GeoWorld magazine that discuss the new breed of map analysis tools, how they can be used to better characterize and communicate spatial relationships, be organized into effective GIS model solutions, and spark entirely new spatial paradigms. The topics covered are written for novices, as well as GIS professionals, in a witty style that entertains as well as informs.

*(click to access additional **Chronological, Applications, Operations** and **Interactive Listings** with hyperlinks to individual Beyond Mapping columns)*

*(click for a hardcopy version of this document posted at **http://www.innovativegis.com/basis/BeyondMappingSeries/**)*

Combined Index

with hyperlinks to individual Beyond Mapping columns

****** *In Preparation* ******

Table Overview:

*The **Combined Index** identifies where **key words and phrases** appear in the four books in the Beyond Mapping Compilation Series.*

Table Structure:

Key Word/Phrase	Book IV **GIS Modeling** (Column 2)	Book III **Map Analysis** (Column 3)	Book II **Spatial Reasoning** (Column 4)	Book I **Beyond Mapping** (Column 5)

Key Word/Phrase *(Column 1) is an alphabetical listing of key words/phrases appearing in the books. Many of the key words/phrases have multiple occurrences in one or more of the books.*

Books *(Columns 2 through 5) identify the books in the series. Entries in these columns identify/link to the **Topic** and **Section** or **sub-section** in a book that contains discussion of the key word/phrase listed in column1 for that row (table record).*

*The **Occurrence Code** hyperlinks identify the Topic ("**T_**"), Section ("**S_**") or Further Reading Sub-section ("**R_**"). For example—*

T3S1** in **column 3**, identifies **Book III**, **Topic 3**, **Section 1
T10S3** in **column 5**, identifies **Book I**, **Topic 10**, **Section 3
***T8S3R5** in **column 2**, identifies **Book IV**, **Topic 8**, **Section 3**, Further Reading **Sub-section 5**.*

< click> on any of the hyperlinks to access the individual Beyond Mapping column in one of the four books that discusses the listed key word/phrase

Key Word/Phrase (Column 1)	Book IV GIS Modeling (Column 2)	Book III Map Analysis (Column 3)	Book II Spatial Reasoning (Column 4)	Book I Beyond Mapping (Column 5)
A				
Analytical classes		**T3S1**		
Arithmetic mean		**T2S3, T5S3**		
Averages		**T2S3, T3S4, T3S6,**		
B				
Balancing		**T9S3, T10S5**		
Base maps		**T8S2**		
C				
Cartographic modeling		**EpilogS2**		
Coefficient of variation		**T2S3, T3S4, T8S3, T9S1, T9S2**		
Clusters, data		**T10S5**		
D				
Data				
and information		**T2S1, T3S1, T6S2**		
grid-based		**T1S1**		
layers		**T2S1, T2S2**		
linked or indexed tables		**T1S1, T2S1**		
mapped		**IntroS1, T1S2**		
mining		**T2S4, T10S6**		
vector-based		**T1S1**		
Databases				
management		**IntroS1, T1S1**		
spatial		**EpilogS1**		
Display types		**T1S1**		
E				
Effective distance		**T2S1, T2S2, T4S2, T4S4, T8S1**		
F				
Flowcharts		**T5S4, T7S3, T8S2, T8S3, T10S6**		
Formulae, see also Models				
classification		**T3S1**		
distance two points		**T2S2, T4S3, T4S4, T9S3**		
weighted average		**T3S4, T6S3, T7S2, T7S3, T9S3**		
gravity model				
intersect two lines				
normal distribution				
slope and aspect				
spatial				
standardizing data				
trend surface models				
G				

comparison				
digital				
discrete				
discrete-cost				
error propagation				
“floating”				
prescriptive analysis				
residual analysis				
similarity				
shadow maps of certainty				
uncertainty				
Models and modeling				
analytical				
binary				
calibration				
cartographic				
distance buffers				
empirical				
error propagation				
logical levels				
“mapematical”				
mathematical				
multiplicative				
overlay operations				
predictive				
prescriptive				
rating				
simple proximity				
spatial				
static				
statistical				
suitability modeling				
surface				
types				
weighting				
N				
Number of samples				
O				
Object-oriented programming				
P				
Polynomial fitting				
Preferred route calculations				
Precision Farming				
Predictive modeling				