

PG-STEAMER

Tutorials

(주)픽소니어

대전광역시 유성구 도룡동 3-1

Email: support@pixoneer.co.kr

Table of Contents

Restricted Rights Notice

The PG-STEAMER software programs and the accompanying procedures, functions, and documentation described herein are sold under license agreement. Their use, duplication, and disclosure are subject to the restrictions stated in the license agreement. Pixoneer Geomatics, Inc., reserves the right to make changes to this document at any time and without notice.

Limitation of Warranty

Pixoneer Geomatics, Inc. makes no warranties, either express or implied, as to any matter not expressly set forth in the license agreement, including without limitation the condition of the software, merchantability, or fitness for any particular purpose. Pixoneer Geomatics, Inc. shall not be liable for any direct, consequential, or other damages suffered by the licensee or any others resulting from use of the PG-STEAMER software package or documentation.

Permission to Reproduce this Manual

If you are a licensed user of its products, Pixoneer Geomatics, Inc. grants you a limited, nontransferable license to reproduce this particular document provided such copies are for your use only and are not sold or distributed to third parties. All such copies must contain the title page and this notice page in their entirety.

Acknowledgments

PG-STEAMER® is a registered trademark of Pixoneer Geomatics, Inc., registered in the Republic of KOREA Patent and Trademark Office, for the computer program described herein.

NCSA Hierarchical Data Format(HDF) Software Library and Utilities

Copyright © 1998 -2005 The Board of Trustees of the University of Illinois All rights reserved.

CDF Library

Copyright © 1999 National Space Science Data Center, NASA/Goddard Space Flight Center

NetCDF Library

Copyright © 1993 -1996 University Corporation for Atmospheric Research/Unidata

HDF EOS Library

Copyright © 1996 Hughes and Applied Research Corporation

Portions of this computer program contain copyright © 1995 -1999 LizardTech, Inc. All rights reserved.

MrSID is protected by U.S. Patent No. 5,710,835. Foreign Patents Pending.

Tiff Library

Copyright © 1998 -1997 Sam Leffler

Copyright © 1991 -1997 Silicon Graphics, Inc.

GeoTiff Library

Copyright © 1999 Frank Womerdam

Table of Contents

1. Understanding Digital Images	1-1
Displaying image data Using Image Composer.....	1-2
Navigation and Measurement on images	1-11
Examining image information	1-19
2. Enhancing Image Colors	2-1
Examining Pixel Values	2-2
Enhancing Colors Locally	2-13
Enhancing Colors Globally	2-21
Appendix : Stretch	2 - 32
3. Mosaic Images	3-1
Importing External Images	3-2
Creating Subset Images	3-8

Table of Contents

Mosaic Images	3-14
4. Rectifying Images Geometrically	4-1
Affine Transformation	4-2
Appendix : 기하보정	4-17
5. Ortho Rectification	5-1
Making an Orthophoto with Photos	5-2
Ortho Rectification with Exterior Orientation	5-14
Ortho Rectification with RPC data	5-20
Appendix : 정사보정	5-24
6. Radiometric Normalization and Change Detection	6-1
Radiometric Normalization	6-2
Examining NDVI Change	6-8
Monitoring Land Cover Change	6-17
7. Projection	7-1
Creating a New Projection	7-3
Define a Projection to an Image Dataset	7-7

Table of Contents

On-the-fly projection	7-9
8. Calculating Indices	8-1
Indices from MSS Data	8-2
Indices from TM Data	8-13
Calculate Surface Temperature	8-25
Appendix : 지수 변환.....	8-30
9. Principal Components Analysis	9-1
Correlations among Bands	9-2
Principal Components Analysis	9-5
Appendix : 주성분 분석	9-15
10. Using Spatial Convolution Filters	10-1
Low-pass Filters	10-2
High-pass Filters	10-8
Texture Filters	10-14
Applying Filters to DEM	10-19
User Defined Filter	10-26
Appendix : Spatial Filtering	10-29

Table of Contents

11. Digitizing on Images	11-1
Digitizing Features	11-2
Editing Features	11-9
12. Merging Image Resolutions	12-1
Merging Different Resolutions	12-2
13. DEM Handling	13-1
Creating a Surface with Interpolation	13-2
Calculating Slope, Aspect and Hillshade	13-10
DEM Interpolation	13-19
14. Unsupervised Image Classification	14-1
Unsupervised Classification	14-2
Appendix : 무감독 분류	14-10
15. Supervised Image Classification	15-1
ROI and Signature Editing	15-2
Applying Various Classifiers	15-11
Neural Network Classifier	15-18
Appendix : 감독 분류	15-23