Contents

Chapter 1 Introduction **1**
1.1. Audience 1
1.2. Scope 1
1.3. Overview of PEX-SI 2
1.4. Porting PEX-SI 4
1.5. Related References 5

Chapter 2 The PEX-SI Client Side **7**
2.1. Client Side Overview 7
2.1.1. Goals 7
2.1.2. Constraints 8
2.2. General Architecture 8
2.2.1. Applications with No PHIGS Monitor 9
2.2.2. Communication Between API and PM 9
2.2.3. API/PM Communication Protocol 9
2.2.4. Error Reporting 10
2.2.5. Control 10
2.2.6. Window Events 10
2.2.7. PHIGS Input Queue 10
2.2.8. Archival Support 11
2.2.9. No Metafile Support 11
2.3. Central Structure Store 11
2.4. Workstations and Workstation Types 12
2.5. Workstation Description Tables 12

2.6. Double Buffering 13
2.7. Error Reporting 13
2.7.1. Asynchronous Notification 13
2.7.2. Synchronous Notification 13

Chapter 3 The PEX-SI Server Side **15**
3.1. Server Side Overview 15
3.1.1. Goals and Constraints 15
3.2. diPEX 16
3.3. osPEX 16
3.4. ddPEX 16
3.4.1. Communication Between diPEX and ddPEX 19
3.5. PEX-ME Resource Support 19
3.5.1. diPEX Resource Management 20
3.5.2. Other diPEX Resources 21
3.5.3. Resource Dependencies 21
3.6. The PHIGS Workstation Module 23
3.6.1. PHIGS Workstation Resources 23
3.6.2. Structure Resources 23
3.6.3. Search Context Resources 25
3.6.4. Pick Measure Resources 25
3.7. The Shared Resources Module 25
3.7.1. Lookup Table Resources 25
3.7.2. Name Set Resources 26
3.7.3. PEX Font Resources 26
3.8. The Rendering Control Module 26
3.8.1. Pipeline Context Resources 26
3.8.2. Renderer Resources 26
3.9. The Transformation Module 27
3.10. The 3D Rendering Module 28
3.11. Miscellaneous ddPEX Functions and Errors 29
3.11.1. Errors in ddPEX 29

Index **31**