

DCMTK - Bug #1100

Rounding error in OFStandard::atof

2024-01-12 14:18 - Marco Eichelberg

Status:	Closed	Start date:	2024-01-12
Priority:	Normal	Due date:	
Assignee:	Marco Eichelberg	% Done:	100%
Category:		Estimated time:	3:00 hours
Target version:		Compiler:	
Module:			
Operating System:			
<div>Description</div> <p>The following code shows that OFStandard::atof() can produce rounding errors that prevent a lossless round-trip e.g. from DICOM FD to JSON and back.</p> <p>This sample program shows that OFStandard::atof() produces results that are different from those of std::stod():</p> <pre>#include "dcmtk/dcmdata/dcfilefo.h" int main() { std::string result; result = "14.399999999999999"; OFBool success; double d2 = OFStandard::atof(result.c_str(), &success); std::cout << std::hexfloat << d2 << std::endl; double d3 = std::stod(result); std::cout << std::hexfloat << d3 << std::endl; return 0; }</pre> <p>Reported 2024-01-11 by Mathieu Malaterre <mathieu.malaterre@gmail.com></p>			

History

#1 - 2024-01-12 18:05 - Marco Eichelberg

- Status changed from New to Closed
- % Done changed from 0 to 100
- Estimated time set to 3:00 h

Closed by commit #ecbf61cb7.