

Corrections for all Printings

Pg	Error	Correction
32	In points 5, 6 and 8, the IP address 18.19.200.1 is incorrect	It should be 18.19.200.2
47	fig 2.15: SND.NXT of Host B is incorrect	The value should be 3051, not 3001
59	Some IP addresses do not match those in the figure	<p>Paragraph should read:</p> <p>As the packet travels from Host A to Host B, it passes through Router A. Router A sees in the NAT table that Host A's address, <u>192.168.10.2:200</u>, already maps to external port 60000, so it chooses this port for the outgoing packet. It then makes an additional entry stating that <u>192.168.10.2:200</u> has sent traffic to <u>12.12.6.5:62000</u>. This additional entry is the key. The packet will probably never arrive at Host B, but after this has happened, Host N can reply to Host B, telling it to connect directly to Host A at 18.19.20.21:<u>60000</u>. Host B does so, and when the packet arrives at Router A, Router A sees that it is indeed expecting an incoming packet from <u>12.12.6.5:62000</u>. It rewrites the packet to be targeting <u>192.168.10.2:200</u> and sends it to Host A.</p>
69	WinSocket2.h is not a header name	<u>WinSocket2.h</u> should be <u>WinSock2.h</u>
73	sockadd_in is not a struct name	<u>sockadd_in</u> should be <u>sockaddr_in</u>
73	In the note, sa_len is no longer a field in the Mac OS X sockaddr	<u>sa_len</u> in the note should be <u>sin_len</u>
77	Listing 3.4 should not call freeaddrinfo on an interated result	<p>Listing 3.4 Name Resolution Using the SocketAddressFactory</p> <hr/> <pre> class SocketAddressFactory { public: static SocketAddressPtr CreateIPv4FromString(const string& inString) { </pre>

```

auto pos = inString.find_last_of(':');
string host, service;
if(pos != string::npos)
{
    host = inString.substr(0, pos);
    service = inString.substr(pos + 1);
}
else
{
    host = inString;
    //use default port...
    service = "0";
}
addrinfo hint;
memset(&hint, 0, sizeof(hint));
hint.ai_family = AF_INET;

addrinfo* result;
int error = getaddrinfo(host.c_str(), service.c_str(),
                        &hint, &result);
addrinfo* initResult = result;
if(error != 0 && result != nullptr)
{
    freeaddrinfo(initResult);
    return nullptr;
}

while(!result->ai_addr && result->ai_next)
{
    result = result->ai_next;
}

if(!result->ai_addr)
{
    freeaddrinfo(initResult);
    return nullptr;
}

auto toRet = std::make_shared< SocketAddress >(*result->ai_addr);

freeaddrinfo(initResult);

return toRet;
}
};

```

80	The 5 th paragraph actually describes the parameter named <code>tolen</code> but claims to describe the parameter named <code>len</code>	<code>len</code> at the beginning of that 5 th paragraph should be changed to <u><code>tolen</code></u>
83	<code>WASGetLastError</code> is not a function	<u><code>WASGetLastError</code></u> should be <u><code>WSAGetLastError</code></u>
94	In listing 3.10, the lines <code>fd_set *writePtr = FillSetFromVector(read, inWriteSet);</code> <code>fd_set *exceptPtr = FillSetFromVector(read, inExceptSet);</code> are incorrect	They should read <code>fd_set *writePtr = FillSetFromVector(write, inWriteSet);</code> <code>fd_set *exceptPtr = FillSetFromVector(except, inExceptSet);</code>
102	<code>sendto</code> is not a function	<u><code>sendto</code></u> should be <u><code>sendto</code></u>
121	In the definition of <code>Read(std::vector<T>&)</code> , the inner call to <code>Read</code> does not take a <code>const</code> argument, so the iterated variable should not be <u><code>const T& element</code></u>	<u><code>const T& element</code></u> should instead be <u><code>T& element</code></u> with no <code>const</code> in front
126	The equal signs were printed as plus signs	The equation should read: $P_{OnGround} * Bits_{OnGround} + P_{InAir} * Bits_{InAir} = 0.9 * 1 + 0.1 * 33 = 4.2$
127	The equal signs were printed as plus signs and the line breaks were omitted	The equation should read: $P_{OnGround} * Bits_{OnGround} + P_{InAir} * Bits_{InAir} + P_{OnCeiling} * Bits_{OnCeiling} = 0.9 * 2 + 0.07 * 2 + 0.03 * 33 = 2.93$
128	The equal signs were printed as plus signs and the line breaks were omitted	$(MaxValue - MinValue) / Precision + 1 = (2000 - -2000) / 0.1 + 1 = 40001$

135	The Serialize code snippet is missing the case keyword from each case in the switch statement	<pre> void Serialize(MemoryStream* inMemoryStream, const DataType* inDataType, uint8_t* inData) { for(auto& mv: inDataType->GetMemberVariables()) { void* mvData = inData + mv.GetOffset(); switch(mv.GetPrimitiveType()) { case EPT_Int: inMemoryStream->Serialize(*(int*) mvData); break; case EPT_String: inMemoryStream->Serialize(*(std::string*) mvData); break; case EPT_Float: inMemoryStream->Serialize(*(float*) mvData); break; } } } </pre>
141	In listing 5.2 the class definition does not end with a semicolon	There should be a semicolon after the closing brace after the class definition
151	In listing 5.9 the code to detect if a game object is missing from the receivedObjects list does not work correctly	<u>find(go) != receivedObjects.end()</u> should be changed to <u>find(go) == receivedObjects.end()</u>
160	The text incorrectly refers to the PlaySoundRPCParams struct as PlayerSoundRPCParams	<u>PlayerSoundRPCParams</u> should be <u>PlaySoundRPCParams</u>
160	In listing 5.7, the typedef statement is missing a semicolon	The first line of the listing should end with a semicolon.
162	The text incorrectly refers to the nonexistent <u>ProcessReplicationFunction</u> .	<u>ProcessReplicationFunction</u> should be <u>ProcessReplcationAction</u> function.
221	HandleDeliverySucess is not a function	<u>HandleDeliverySucess</u> should be <u>HandleDeliverySuccess</u>

225	ReplicationTransmissionData is not a type	<u>ReplicationTransmissionData</u> should be ReplicationManagerTransmissionData

This errata sheet is intended to provide updated technical information. Spelling and grammar misprints are updated during the reprint process, but are not listed on this errata sheet.

