SiTiming Background v1

SiTiming is the new results software from SPORTident UK. This document explains why we decided to create this new application and what the key changes are from our previous software.

The majority of the basis of SiTiming has come from its predecessor, AutoDownload. AutoDownload had evolved over more than ten years based on a results model originally designed for simple orienteering events in the UK. Many changes had been made to the model over the years and it has served its purpose well, but in recent times some of the key parts of that model that were set in stone have become not fit for purpose. After AutoDownload was successfully used for the World Orienteering Championships in 2015 the decision was made to make all the changes to the results model that were needed in one go.

Society has become ever more "on-demand" and this is true for SPORTident results as well. AutoDownload was originally designed for a single download for each SI-Card producing a result, and this hasn't changed until now. SiTiming allows results to be created from non-downloaded data, as well as multiple downloads to create a single result. This is the single biggest change and some of the effects of this change need a bit more explaining.

Previously with AutoDownload non-download punches were stored in a big "pool" on the event. The initial design was purely for safety checking, to read check and start boxes to determine who started and this was cross-referenced against downloads. This then evolved through commentary auto-send and radio punches, "sprinter" start and finish and even to some MTB Gravity Enduro events which only had non-download data. SiTiming now identifies each punch as it is stored in the database to the competitor who made that punch, this slows down the save very slightly but gives a big increase in speed when using these punches to form a result. It also has a side effect that if the competitor cannot be determined e.g. if SI-Card number is not known then it becomes "unidentified". Punches will automatically become identified when the appropriate entry data is corrected.

SiTiming treats downloads in much the same way now as well. As the download is saved it will identify the competitor and if it can't it will become unidentified as well. One effect of this is now all downloads are stored at the time of download. In AutoDownload if a download could not be identified you would either be referred to a manual download screen, or be told to go to the problems desk – this is still true in SiTiming but the download will have been saved already as unidentified. Also there is a change here as there is no longer a "non-stop" download option which allows a dummy entry to be made – these downloads will simply be left in unidentified for later fixing.

As mentioned above, in AutoDownload the safety check cross-references downloads to non-download punches. This is not necessarily possible in SiTiming as there may not even be any downloads. To counter this we have introduced two new concepts. Firstly, a competitor is considered "safe" when their most recent punch is made at a control which is considered a "stop" control (actually this is not a new concept as it was in our Live Event Monitor solution, this is very similar but controls are actually flagged as stop controls). Secondly, downloading an SI-Card will now also include a pseudo punch at that download station – this is the equivalent in AutoDownload of the download date/time being stored against the download but in this case it will also use the mode and code of the download station. For conventional events with a single download it is expected that the download station will become the stop control, and SiTiming will

create such a control for you when you create a new event. This does however mean that the clock time on your download PCs does become quite important and if you always leave your SPORTident stations in either daylight saving time or never in daylight saving time you will need to do the same with your download PCs. For more complicated events different "download" controls can be used – e.g. one could be stop and one might be an interim download half way round. You can even put a download control in to a course!

AutoDownload stored only the top level result information against an entry e.g. time taken, points accrued etc. This allowed a simple set of results for a course to be produced quite quickly. However results requiring split time information were slow to produce because this information had to be calculated during result production. In SiTiming the whole result is stored against the result. This means results are now much quicker to produce, however you may be asked to recalculate the results more often if you need to make changes to the course whilst the event is underway.

SiTiming also has some other major changes to the database structure but these should be more transparent to the user, these are more for performance, future-proofing and for fixing some long-standing design issues. Because of the large number of changes to the database we could not sensibly allow an upgrade of an AutoDownload database, or restore of backups from AutoDownload. However we do allow an import of an entire AutoDownload database in to SiTiming, leaving the original unchanged. However please consider that the import does its best to recreate what AutoDownload did on those past events, it does not necessarily set-up the event to make the best use of what SiTiming can now do, so please consider setting up new events from scratch rather than copying old imported events.

SiTiming can be installed alongside AutoDownload so while you get familiar with the new concepts you can still use AutoDownload. This is part of the reason for the new name, but there are more reasons. Our LappedEnduro (Lap counting software) and TRS (Team Results Sheet – used for complex scoring requirements such as at corporate challenges) applications are now also integrated and users of these can do import and side by side installation as well.

One last thing that might need explaining is the version number. Original versions of AutoDownload were unsurprisingly v1.x – when we changed from the original Java platform in 2008 to Microsoft.NET we decided that we should increase to v2.x and co-incidentally this ran on version 2.0 of Microsoft.NET. As part of the big changes we have moved to using version 4.0 of Microsoft.NET so to avoid confusion we decided that SiTiming should be v4.x rather than v3.x.