The research described here focuses on global tempo transformations of monophonic recordings of saxophone jazz performances. We have investigated the problem of how a performance played at a particular tempo can be automatically rendered at another tempo while preserving its expressivity. That is, listeners should not be able to notice, from the expressivity of a performance, that has been scaled up or down from another tempo. To do so, we have developed a case-based reasoning system called TempoExpress. The results we have obtained have been extensively compared against a standard technique called Uniform Time Stretching (UTS), and we show that our approach is superior to UTS.