In 1993, Schellekens determined the possible Lie algebra structures for the weight one subspaces of holomorphic vertex operator algebras of central charge 24. There are 71 cases in his list but not all cases were constructed at that time. It was also conjectured that the VOA structure of a holomorphic VOA of central charge 24 is uniquely determined by the Lie algebra structure of its weight one subspace.

In this talk, we will report our recent work on the classification (with H. Shimakura, X.J. Lin and K. Kawasetsu). We will discuss the constructions of all 71 cases in Schellenkens’ list. Moreover, we will show that the VOA structures of certain holomorphic VOAs of central charge 24 are uniquely determined by their weight one Lie algebras using a technique which we call “reverse orbifold construction”. (Received August 04, 2016)