J. Javier Zuniga* (zuniga@math.umn.edu), 127 Vincent Hall, 206 Church St. S.E., Minneapolis, MN 55455. Stable Ribbon Graphs and Quantum Master Equation. Preliminary report.

A new compactification of the decorated moduli space of stable Riemann surfaces is introduced together with an orbifold cellular decomposition given by stable ribbon graphs decorated by tangent directions based on the work of Looijenga. This compactification turns out to give rise in a natural way to a solution of the BV Quantum Master equation using cellular chains given by the earlier decomposition. (Received September 26, 2006)