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Duk-Sun Kim* (mass@skku.edu), Chun-chun Dong 300, Jang-an Gu, Suwon City, Kyoung-ki Do, Korea (South), Suwon, Kyoungk-ki 440-746, South Korea, and **Sang-Gu Lee** (mass@skku.edu), Chun-chun Dong 300, Jang-an Gu, Suwon City, Kyoung-ki Do, Korea (South), Suwon, Kyoungk-ki 440-746, South Korea. Analysis of optimal solutions and its tiling in $m \times n$ size Black-Out Game.

For finding the optimal strategy in Blackout game which was introduced in the homepage of popular movie "Beautiful mind", we have developed a mathematical proof and an algorithm with a software. It needs only the concept of basis and knowledge of basic linear algebra. We shown square case in (Lee,2004) and now we show new result in $m \times n$ black-out game(or Merlin Game). (Received September 16, 2007)