1025-05-249 **Jerzy Wojciechowski*** (`jerzy@math.wvu.edu`), Department of Mathematics, West Virginia University, PO Box 6310, Morgantown, WV 26506-6310. *Edge-Bandwidth of Tori.* Preliminary report.

The *edge-bandwidth* $B'(G)$ of a graph G is the smallest number b for which there is an injective labeling of $E(G)$ with integers such that the difference between the labels at any adjacent edges is at most b. Let $T_n = C_n \oplus C_n$ be the $n \times n$ torus (where $\oplus$ is the Cartesian product and C_n denotes the cycle with n vertices). Balogh, Mubayi, and Pluhár [*Theoret. Computer Science*, **359** (2006) 43–57] established the following bounds for the edge-bandwidth of T_n:

$$4n - 2\sqrt{2n} - 1 \le B'(T_n) \le 4n, \quad n \ge 3.$$

Pikhurko and Wojciechowski [*Theoret. Computer Science*, **369** (2006) 35–43] improved the lower bound to $4n - 5$:

$$4n - 5 \le B'(T_n) \le 4n, \quad n \ge 3.$$

In this talk we are going to discuss the issue of closing the remaining gap of 5. We will also consider the edge-bandwidth of the more general tori $C_n \oplus C_m$ for $n \ne m$. (Received January 23, 2007)