

C++11 code 2.6.9: Computation of edge-node incidence matrix [G](#) → [GitLab](#)

```
2 bool testZeroIncidenceMatrixProduct(const If::mesh::Mesh &mesh) {
3     bool isZero = false;
4
5     Eigen::SparseMatrix<int> G = computeEdgeVertexIncidenceMatrix(mesh),
6                               D = computeCellEdgeIncidenceMatrix(mesh);
7
8     Eigen::SparseMatrix<int> O = D * G;
9     // Possibility 1:
10    // Not prone to roundoff errors, since O is an integer matrix!
11    isZero = O.norm() == 0;
12    // Possibility 2: But this doesn't use the fact that O is sparse.
13    // isZero = Eigen::MatrixXi(O).isZero(0);
14    return isZero;
15 }
```