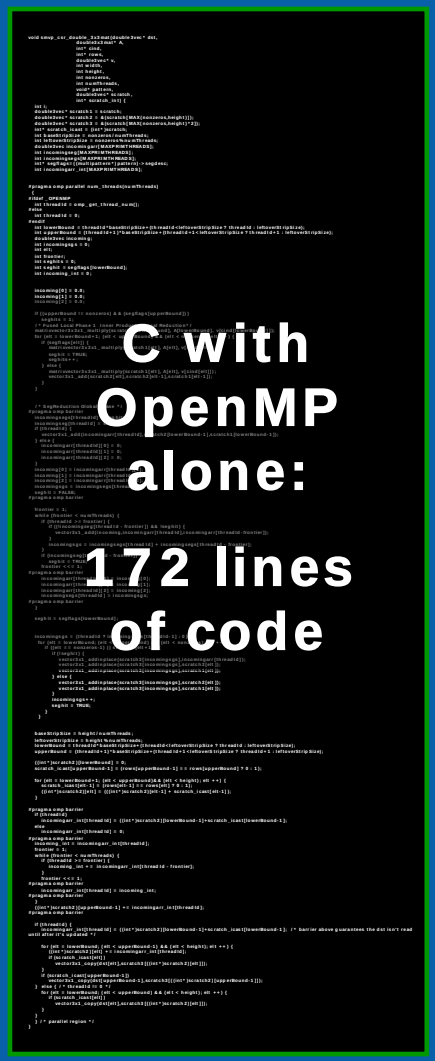
Ct: Data Parallel Programming



C with OpenMP alone: 172 lines of code

Ct will extend C/C++ by adding new data structures & operators which exploit opportunities for the parallel processing of data

- Greater performance due to concurrent execution
- Library-like interface compatible with existing programming environment
- Optimizes code at run time for the user's hardware
- Scalable from 1 to *n* cores

Ct: 6 lines of code, faster, scalable

```
CCtTVEC<double> sparseMatrixVectorProduct(
  CCtVEC<double> A, CCtVEC<int> rowindex,
  CCtVEC<int> cols, CCtVEC<double> v)
{
  CCtVEC expv = ctDistribute(v,cols);
  CCtVEC product = A*expv;
  return ctMultiReduceSum(product,rowindex);
}
```