

Instances of the Asymmetric Close-Enough Vehicle Routing Problem.

Create by Lettiery D'Lamare

email for contact: lettierydl@gmail.com

Directory Division

- 240 instance files with identical rays and winds (IR_IW directory).
- 240 instance files with random radians and identical winds (RR_IR directory).
- 240 instance files with identical rays and random winds (IR_RW directory).
- 240 files of instances with rays and random winds (RR_RW directory).

IW with wind force 10 and direction 90o (wind rose [east]) IR with radii equal to 0.5

Formatting files:

- Line 1: n v, on the first line.

n number of points (with base).

v number of vehicles available.

- Line 2: x and r, base coordinates ($r = 0$).

- Next n-1 lines, x y r, coordinates of the demand points.
- Matrix of winds n by n.
- Last line, capacity of vehicles with the interference of the winds.

C ++ reading code

```
void loadDataACEVRP(char* fileName){
    FILE * f = fopen(fileName, "r");
    //reading initial data
    int n, v;
    fscanf(f, "%d %d", &n, &v);
    //reading coordinates
    int index = 0;
    vector<float>x(n), y(n), r(n);
    for(int i=0; i < n; i++){
        fscanf(f, "%lf %lf %lf", &x[i], &y[i], &r[i]);
    }
    //reading winds
    vector<float>b(n);
    for(int i=0; i < n; i++){
        b[i] = vector<float> (n,1);
        for(int j=0; j < n; j++) {
            fscanf(f, "%f", &b[i][j]);
        }
    }
    //reading capacity
    vector<float>q(v);
    for(int k=0; k < v; k++){
```

```
        fscanf(f, "%f", &q[k]);  
    }  
    fclose(f);  
}
```