

**Title: "U Can't Bound This"**

**Written and performed by ADogg and the Dhruvhammer**

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Yo, check this.

We-z about to throw down some phunky phresh  
rappamatics on yo' punk vita fool.  
So sit down, 'fo U get knocked down.  
Step back, 'fo U get whacked.  
And snoop, 'fo u stoop, 'cuz youz 'bout to get scooped.

Word to your motherboards.

Hit it, Dhruvhammer.

{silence -- the sound made by every member of the  
empty set}

U can't bound this

{music begins}

U can't bound this

U can't bound this

[whoa-whoa, whoa, whoa -- whoa-whoa, whoa]

U can't bound this

[whoa-whoa, whoa, whoa -- whoa-whoa, whoa]

My my my I--P's are simply, too large  
makes me say, "Oh my Lord"  
Thank you -- for blessing me  
with CPLEX code and a phat SP  
Feels good, when you know U prunin' down  
A super-dope RISC chip from the Yorktown  
it's hard -- that's rough  
So this is why -- [uh] -- you branch and cut.

I told you 1st year (U can't bound this)  
Yeah, that's how we branchin' and you know (U can't  
bound this)  
Look at my objective, man (U can't bound this)  
Yo, let me bust some funky heuristics.

Phresh new tricks, advance  
The state of the art, now ya know you publish that  
So earn, your PhD  
Someday soon, U be famous like me  
During lecture, hold on  
Rap a little bit, do proof by song  
Like that, like that  
Dope proposition, this lemma's in the bag  
Let 'em know, that you're too much  
And this is Prof. -- [uh] -- U can't touch.

[whoa-whoa, whoa, whoa -- whoa-whoa, whoa]  
Yo, I told you (U can't bound this)  
Why you cycling there, Bland? (U can't bound this)  
Yo -- Fourier-Motzkin, sucka.

Polytopes, their scope  
Much too large to explicitly cope  
So enumerate, implicit  
Separate fast find a new tight facet  
That's a hype--erplane  
Prune that branch, it's the name of the game  
tableau, to stash  
what it gonna take in the chip to cache  
the page, evict  
Either plumb fast or you might as well quit.

Store a word because you know...  
U can't bound this.

U can't bound this.

Decompose! {Music breaks down.}  
Stop -- Dantzig-Wolff!

Cutting planes, by far  
best found in a dimly lit bar  
so flip, that coaster in the air {ADogg flips a coaster}  
Call Bill Cook, run a comb through your hair  
Now follow, the central path  
Scale that data make your polytope phat  
So make, your step-size large  
Do this in practice, it's fast to converge.  
[quadratic convergence]

Yeah... (I *can* bound this)  
Look, man (U can't bound this)  
U better get sparse, boy, 'cuz U know (U can't invert this)  
Call Karmarkar - simplex is back.

Purify! {Crazy bridge.} Stop -- polytime!

U can't bound this.  
U can't bound this.  
U can't bound this.

Pivot fool! {Nice pants, Archer.}  
[Randomized pivoting *rules!*]  
Stop -- polytime!

Solve assignment problems  
get tight bounds at the root  
Lagrange relaxation and Christofides to boot  
Now how could I ever, forget duality  
with fly dual basis, in main memory  
I've toured around the world, from London to the Bay  
It's dope Held-Karp, and a 2-op swap  
or you can branch and bound all day.  
U can't bound this.

U can't bound this.  
U can't bound this.  
Yeah, U can't bound this.  
I told you, U can't bound this.  
Too hype -- can't bound this.

Get me outta here.  
U can't bound this.

(Based on the smash 1990 rap hit, "U Can't Touch This,"  
by MC Hammer, which is in turn based on the classic  
1981 phunk jam "Super Freak," by Rick James.)