THE AFRICA- WE- WANT:

AFRICA TSP[NP=P] COMPUTER NETWORKS DESIGNS

FOR AGENDA 2063

CRISSCROSSING SKY-LAND-SEA FREEWAYS

PART I : AFRICA JUMPING THE COMPUTER SCIENCE & DISCRETE MATHEMATICS NP-COMPLETE COMPUTATIONAL INTRACTABILITY BARRIER

EXECUTIVE SUMMARY

GIVEN:

FIRST NETWORK DIMENSION

NI[n] = { 1, 2,----, I,----, n}

= SOURCE NODE SET

SECOND NETWORK DIMENSION

NJ[dn] = { 1,2,----, J,----, n}

= TERMINAL NODE SET

THIRD MISSING NETWORK DIMENSION

ND[dn] = { d1,d2,----, dk,----, dn}

= DEDEKIND-CUT-WEIGHT WELL-ORDERING SET

FROM VA(1DSOLID-NET) TO VB(2D LIQUID-NET) AND

FROM VC(3D GAS- NET (FREE)) TO VD(3D GAS-NET (ORDERED))

WEIGHTED NETWORK TRANSFORMATIONS THE PREDICATE TSP IS SHOWN TO HAVE [NP=P] COMPUTATIONAL TRACTABILITY.

GRAPH THEORETIC SOLID-NET

1D NODAL ARC-WEIGHT CONNECTIVITY MATRIX:

VA[NI[n] x NJ[n]] = {Wij} DISCONNECTED ARC-WEIGHTS

(VA PREDICATE TSP[NP≠ P] USING ENUMERATION METHODS)

GROUP THEORETIC LIQUID-NET

2D NODE-LINK-NODE WEIGHT CONNECTIVITY MATRIX:

VB[NI[n] x NJ[n]]= { I,Wij,J} DISCONNECTED LINK-WEIGHTS

= WEIGHTED CANTOR'S ARRAY

(VB PREDICATE TSP[NP ≈ P] USING APPROXIMATE APPROACHES)

GROUP THEORETIC GAS (FREE D-CUT MOLECULAR-WEIGHT)

3D FREE-MOLECULAR-WEIGHT NODE-LINK-NODE CONNECTIVITY

MATRIX: VC[NI[n] x NJ[n]⏐ ND[dn]FREE]= { I,W(dk-FREE) ij, J}

= FREE DEDEKIND-CUT MOLECULAR-WEIGHT CANTOR'S ARRAY

(VC PREDICATE TSP[NP ≠ P] USING ENUMERATION METHODS)

GROUP THEORETIC GAS (ORDERED D-CUT MOLECULAR-WEIGHT)

3D ORDERED-MOLECULAR-WEIGHT NODE-LINK-NODE CONNECTIVITY

PERIODIC-TABLE: VD[NI[n] x ND[dn]⏐ NJ[n]FREE]= { I,W(dk) ij, J-FREE}

= ORDERED- DEDEKIND-CUT MOLECULAR-WEIGHT CANTOR'S ARRAY

(VD PREDICATE TSP[NP = P] USING THREE OPTIMALITY CONDITIONS)

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PART II : AFRICA SILENCING THE GUNS BY CRISSCROSSING SKY-LAND-SEA FREEWAYS SIMple MILITARY, TRANSPORT AND MOBILITY OBJECTIVE

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