Acknowledgements

CLEMSON

Physical Mapping

Cari Soderlund
Mingsheng Chen
Eric Fang
Barbara Blackmon
Jose Luis Goicoechea
Teri Rambo

Ralph Dean
Gernot Presting

COLLABORATORS

Takuji Sasaki
W. Richard McCombie
Rob Martienssen
Rick Wilson
Lincoln Stein
Jiming Jiang
Steve Goff
Gerard Berry
Brad Barbazuk

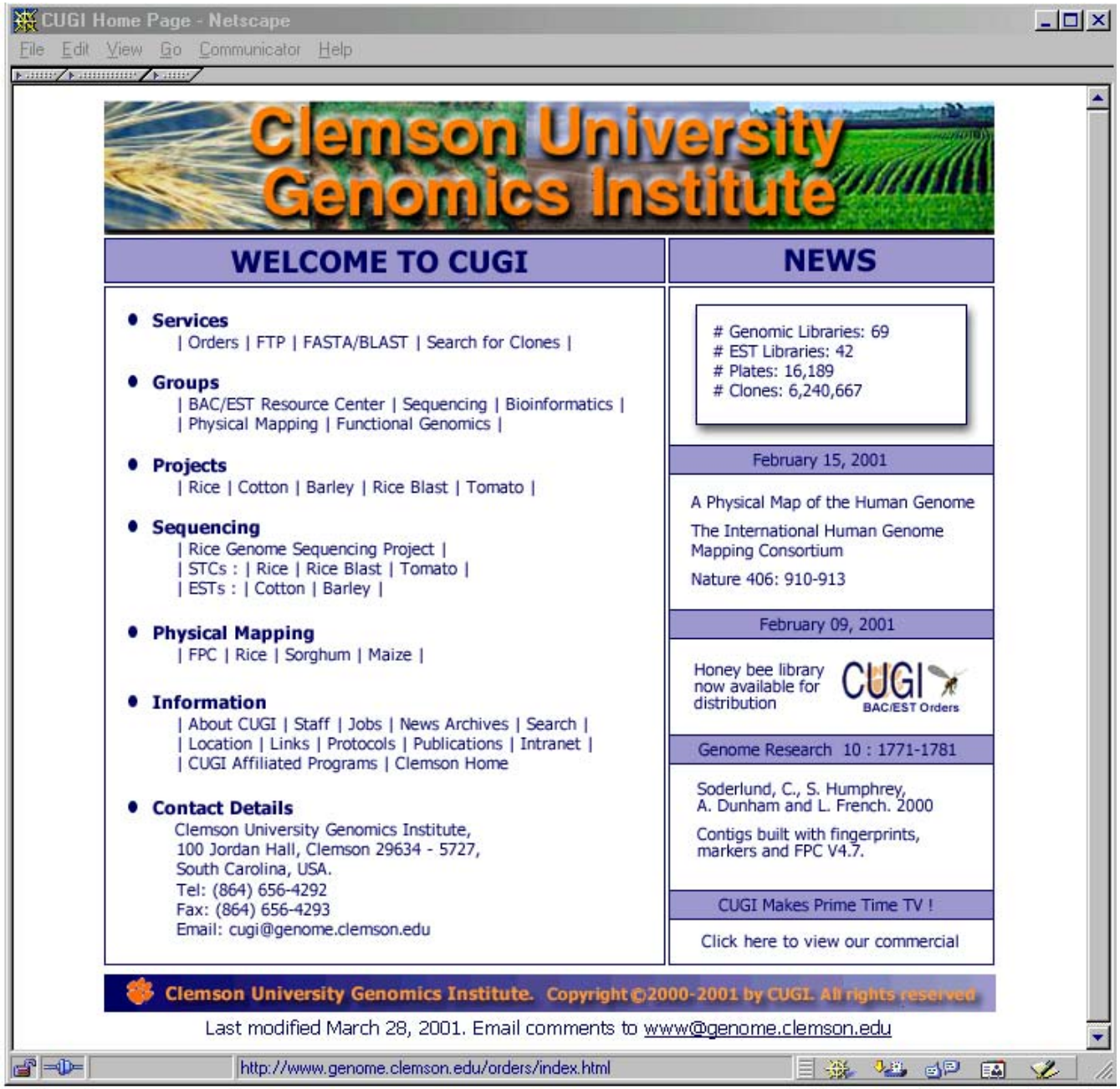
- Based on STC hits to the Monsanto sequence, 38,287 Monsanto-to-CUGI clone associations were established. 1636 unique Monsanto clones were associated with 1442 unique public markers with high confidence (the markers are from the RGP RFLP map or from hits to finished clones from the IRGSP). These data were placed into our FPC database and helped anchored 96 contigs which had not been previously anchored.

- With CUGI data, we have anchored 281 contigs (out of 580 contigs in total) containing 275 Mb DNA or 71% of the rice genome.
- With Monsanto data integration, we have anchored 377 contigs containing 339 Mb DNA or 87% of the rice genome.

CUGI-Monsanto Map Integration

Marker	Anchored Contig	Genome Coverage Mb	Genome Coverage %
CUGI	281	275	71%
Monsanto	96	64	16%
Total	377	339	87%

- All but 4 of the conflicts among CUGI, Monsanto and Finished Sequence data by analyzing the strength of Monsanto and CUGI data. Our first set of marker hybridization data confirmed our analysis.
- We are designing overgo primers based our current physical map to anchor additional contigs.
- Estimate that with all the data integration, we will have a genome coverage of about 95% for the anchored contigs.


CUGI Home Page - Netscape
File Edit View Go Communicator Help
Clemson University Genomics Institute
WELCOME TO CUGI
Services
| Orders | FTP | FASTA/BLAST | Search for Clones |
Groups
| BAC/EST Resource Center | Sequencing | Bioinformatics |
| Physical Mapping | Functional Genomics |
Projects
| Rice | Cotton | Barley | Rice Blast | Tomato |
Sequencing
| Rice Genome Sequencing Project |
| STCs : | Rice | Rice Blast | Tomato |
| ESTs : | Cotton | Barley |
Physical Mapping
| FPC | Rice | Sorghum | Maize |
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Contact Details
Clemson University Genomics Institute,
100 Jordan Hall, Clemson 29634 - 5727,
South Carolina, USA.
Tel: (864) 656-4292
Fax: (864) 656-4293
Email: cugi@genome.clemson.edu
NEWS
Genomic Libraries: 69
EST Libraries: 42
Plates: 16,189
Clones: 6,240,667
February 15, 2001
A Physical Map of the Human Genome
The International Human Genome Mapping Consortium
Nature 406: 910-913
February 09, 2001
Honey bee library now available for distribution
CUGI
BAC/EST Orders
Genome Research 10 : 1771-1781
Soderlund, C., S. Humphrey, A. Dunham and L. French. 2000
Contigs built with fingerprints, markers and FPC V4.7.
CUGI Makes Prime Time TV !
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Last modified March 28, 2001. Email comments to www@genome.clemson.edu
http://www.genome.clemson.edu/orders/index.html

CUGI

Rice FPC map

CUGI was funded by Novartis to fingerprint the Rice nipponbare library. The library is available from CUGI. The clones were digested with HindIII, run on an agarose gels, band-called using Image, and automatically assembled at a 1e-13 using FPC. The anchored markers are from the RGP high desnsity rice genetic map . The eMarkers were computed by blasting the STCs against the all ESTs.

	Genome (Mb)	Clones	Size (kb)	Coverage	Markers	Anchors	eMarkers
Rice	430	64849	130	20x	1191	629	5890

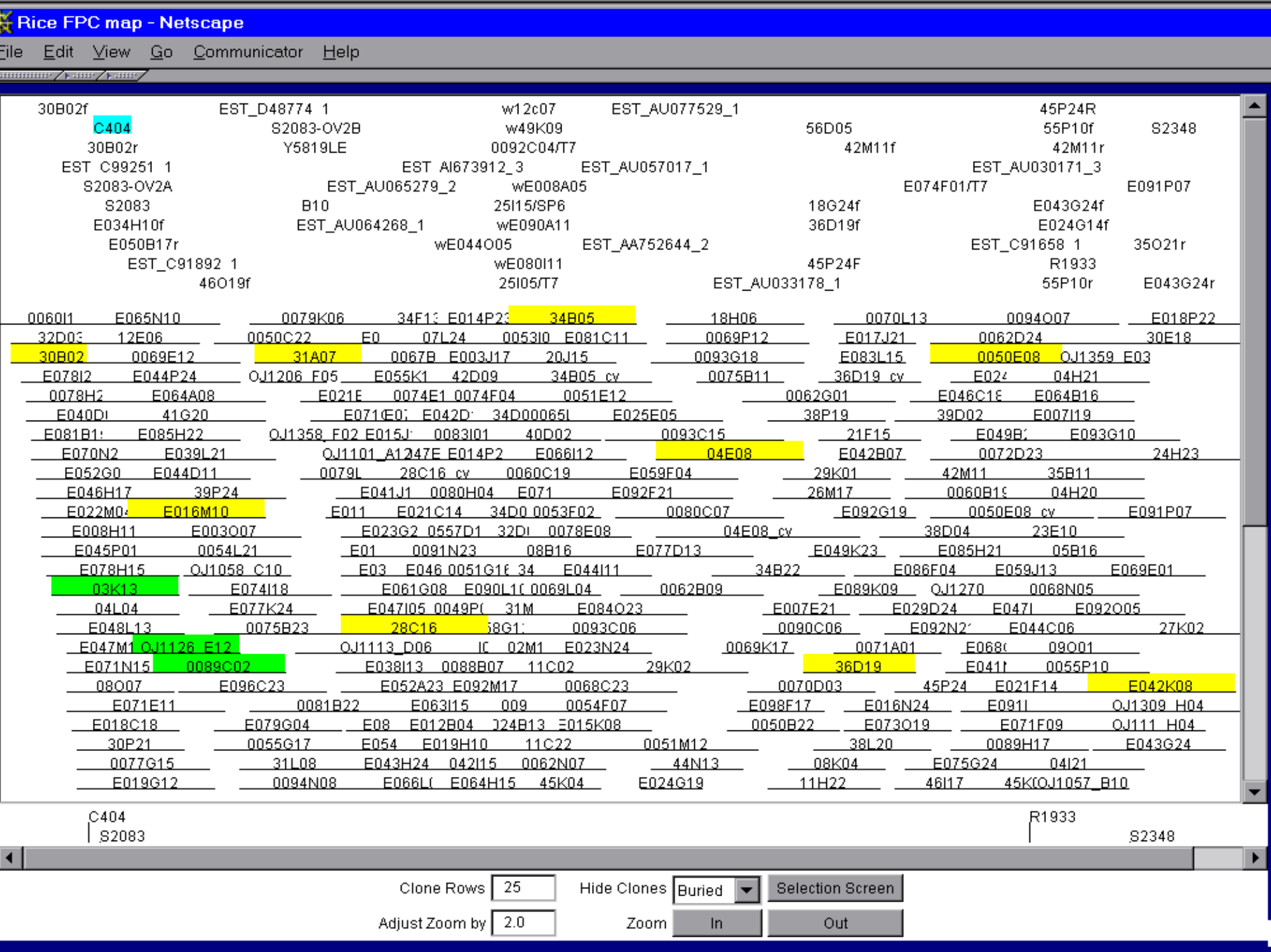
The O4/Mar/01 FPC map is available. NOTE: we are still working on this map. The following changes will be made in the near future:

- The clones will be consistently names using the same name as given for the STC, e.g. OSJNBa0001A01 will be a0001A01.
- The contigs will be renumbered to reflect their ordering along the genetic map (unanchored contigs will be at the end of the list). Contigs will be merged.
- We will regenerate our eMarker data.
- There are some comments in FPC that should not be on our WebFPC.

The FPC file is available via ftp. The bands, sizes and gel files will not be available.

WebFPC a Rice Java display of the FPC contigs. Note:

- This is the first version of WebFPC, so there may be some bugs. It has only been tested on Sun/Netscape and PC/Explorer.
- To search for the clone name, you must use the name used in FPC (which you probably don't know). This will get fixed when we regenerate FPC with the correct names.
- A few "how-to_use" comments: Double click a contig to see it. To return to the WebFPC display, select "Selection Screen". Selecting a clone will highlight buried clones (if


Rice FPC map - Netscape
File Edit View Go Communicator Help
30B02f EST_D48774_1 w12c07 EST_AU077529_1 45P24R
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30B02r Y5819LE 0092C04/T7 42M11f 42M11r
EST_C99251_1 EST_AI673912_3 EST_AU057017_1 EST_AU030171_3
S2083-OV2A EST_AU065279_2 wE008A05 E074F01/T7 E091P07
S2083 B10 25I15/SP6 18G24f E043G24f
E034H10f EST_AU064268_1 wE090A11 36D19f E024G14f
E050B17r wE044O05 EST_AA752644_2 EST_C91658_1 35O21r
EST_C91892_1 wE080I11 45P24F R1933
46O19f 25I05/T7 EST_AU033178_1 55P10r E043G24r
0060I1 E065N10 0079K06 34F1 E014P23 34B05 18H06 0070L13 0094O07 E018P22
32D0 12E06 0050C22 E0 07L24 0053I0 E081C11 0069P12 E017J21 0062D24 30E18
30B02 0069E12 31A07 0067B E003J17 20J15 0093G18 E083L15 0050E08 OJ1359_E03
E078I2 E044P24 OJ1206_F05 E055K1 42D09 34B05_cv 0075B11 36D19_cv E02 04H21
0078H2 E064A08 E021E 0074E1 0074F04 0051E12 0062G01 E046C1 E064B16
E040D 41G20 E071 E0 E042D 34D00065 E025E05 38P19 39D02 E007I19
E081B1 E085H22 OJ1358_F02 E015J 0083I01 40D02 0093C15 21F15 E049B E093G10
E070N2 E039L21 OJ1101_A12 47E E014P2 E066I12 04E08 E042B07 0072D23 24H23
E052G0 E044D11 0079L 28C16_cv 0060C19 E059F04 29K01 42M11 35B11
E046H17 39P24 E041J1 0080H04 E071 E092F21 26M17 0060B1 04H20
E022M0 E016M10 E011 E021C14 34D0 0053F02 0080C07 E092G19 0050E08_cv E091P07
E008H11 E003O07 E023G2 0557D1 32D 0078E08 04E08_cv 38D04 23E10
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E048L13 0075B23 28C16 8G1 0093C06 0090C06 E092N E044C06 27K02
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E071N15 0089C02 E038I13 0088B07 11C02 29K02 36D19 E041 0055P10
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E071E11 0081B22 E063I15 009 0054F07 E098F17 E016N24 E091I OJ1309_H04
E018C18 E079G04 E08 E012B04 J24B13 E015K08 0050B22 E073O19 E071F09 OJ111_H04
30P21 0055G17 E054 E019H10 11C22 0051M12 38L20 0089H17 E043G24
0077G15 31L08 E043H24 042I15 0062N07 44N13 08K04 E075G24 04I21
E019G12 0094N08 E066L E064H15 45K04 E024G19 11H22 46I17 45K OJ1057_B10
C404
S2083
R1933
S2348
Clone Rows 25
Hide Clones Buried
Selection Screen
Adjust Zoom by 2.0
Zoom In Out

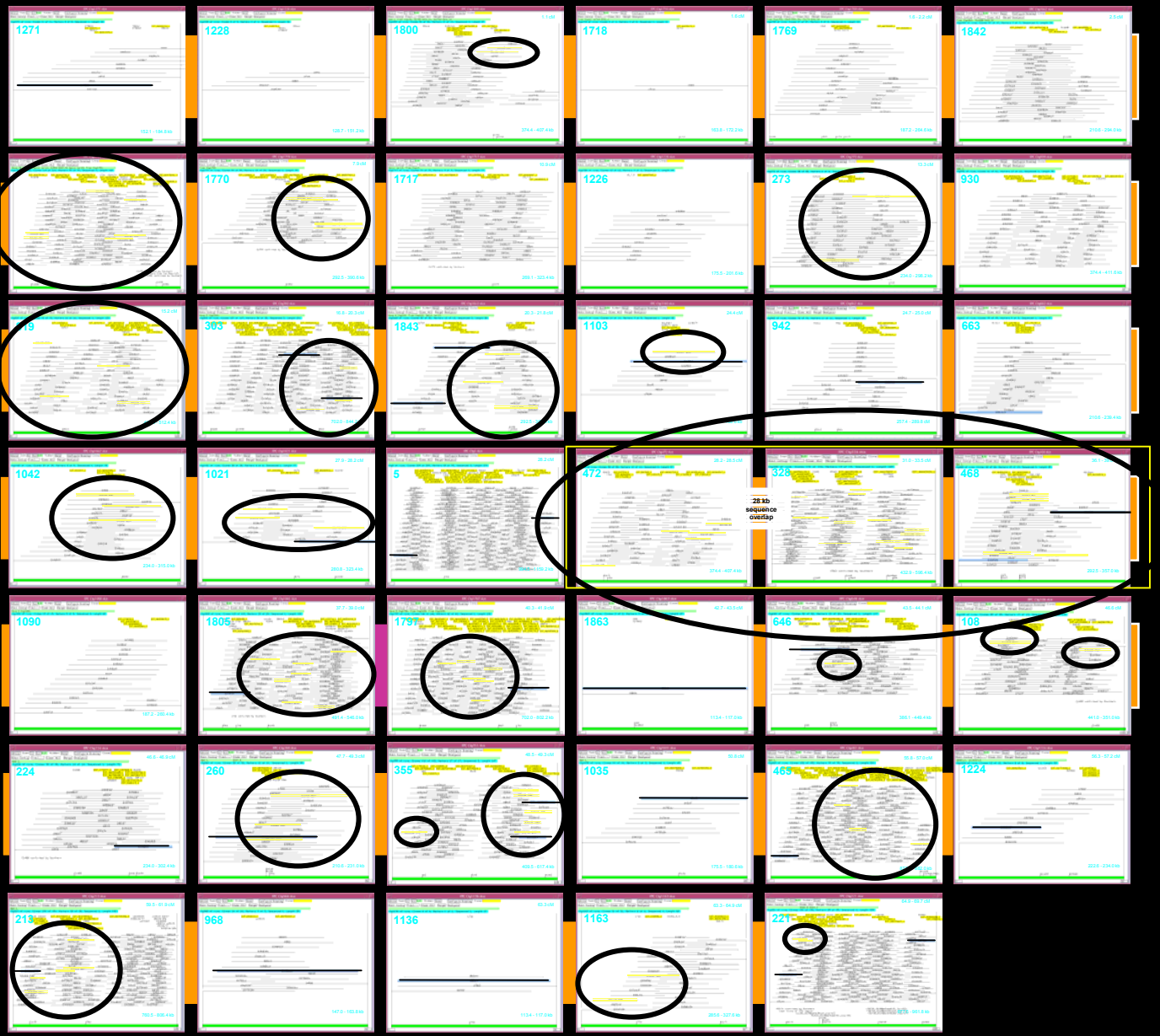
Effect of Monsanto BACs on CUGI FPC Project

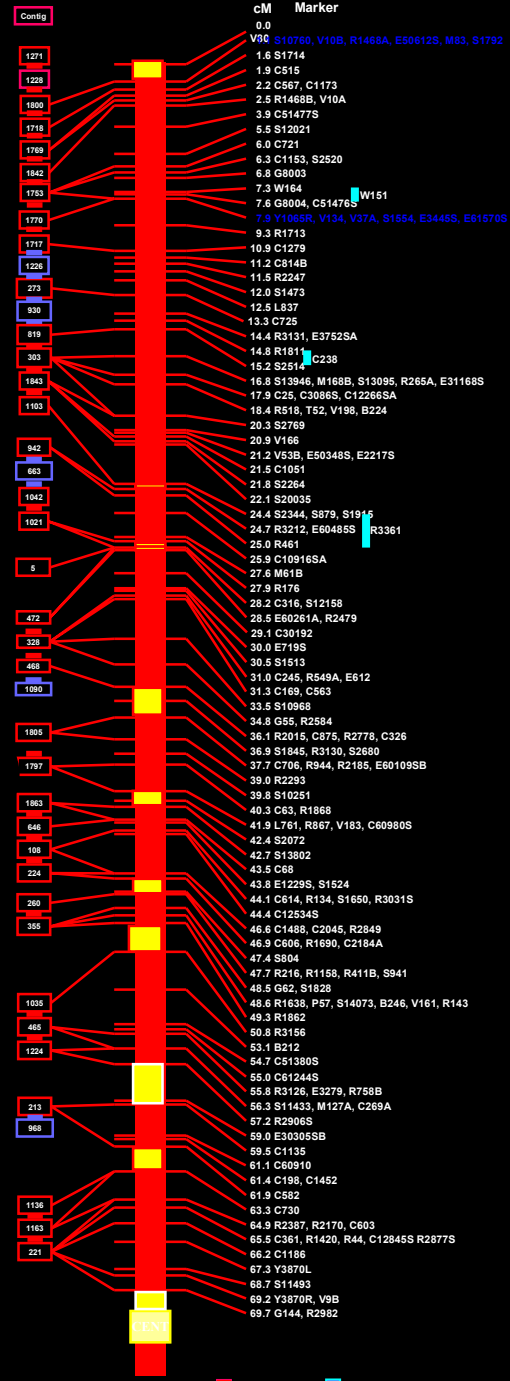
- Chromosome 3
  - Contig 1770 was merged into contig 1753
    Merge previously known
  - Contig 1434 was merged into contig 1163
    Merge previously know
  - Contig 1670 was merged into contig 355
    Merge *unknown* but both contigs were already on map in correct order.
  - Contigs 442, 328 and 468 were merged. Contig order known, merge *unknown*.

PHYSICAL MAP OF RICE CHROMOSOME 3s: CURRENT STATUS

CUGI Physical Map Group

B. P. Blackmon, J. L. Goicoechea, E. G. C. Fang, G. Presting, L. J. Barnett, J. C. Henderson, S. Higingbottom, J. M. Looper, D. Phimphilai, J. Phimphilai, A. V. Smith, B. J. Williams, R. A. Wing





Updated: Jan. 31, 2001

Clones for sequencing

Monsanto's BACs

Color code for contig anchoring: Hybridization FPC analysis

Rice Chromosome 3 (28.2-30.9 cM)