

Notes from Hades

Life is continuing to get more interesting around here. Erik started walking in early January, and Scott in late January, so we have had the additional challenge of two very active boys who are now even more mobile. They continue to be very good natured, although they have gotten a bit clingy. They now refuse to be spoonfed – they want to feed themselves, so we end up chopping up bits of whatever we are eating to give to them. This has the beneficial side effect that we are eating healthier than before.

I'm still interested in feedback on the Liftoff! Mars Landing Variant. It is available on my website (the link is on the main page). It is in the form of an Adobe document, so you'll need Acrobat Reader to read it, but Acrobat Reader is available for free as a download. I urge everyone who is at all interested in it to take a look and let me know what you think.

Doggerel ends this issue, with yet another victory by Andy Lewis. Congratulations to Andy on a very hard fought game.

Adelphia has upgraded its servers. This has two affects. First of all, the URL has changed. It is now <http://users.adelphia.net/~chassler>. The old address still works (it gets forwarded), but you are probably better off using this one directly. The second affect is that my space allotment has doubled. So, I can put more supplementary information on the website as well as keep more back issues on line. I am interested in knowing how frequently people refer to the back issues so that I can learn whether it is better to keep the supplementary information online.

The next deadline is **Tuesday, April 1 at 5:00 p.m. Pacific Time.** No fooling. Please note that games that are run by guest GMs or in a subzine could be on a different schedule, so look at the games themselves. **Please do not call or fax orders after 10:00 p.m. Pacific time.** My wife and I tend to retire early.

Contents

| | | |
|----------------------------|----------------------|---------|
| Howling at the Moon | Letter Column | Page 1 |
| Off the Leash | Machiavelli | Page 2 |
| Wild Dog | Machiavelli | Page 3 |
| Warg | Downfall XIII | Page 5 |
| Hyena | Merchant of Venus | Page 6 |
| Dog Show | Age of Renaissance | Page 6 |
| Doggerel | New World | Page 7 |
| Watchdog | Liftoff! | Page 8 |
| Pavlov | Dune | Page 9 |
| Dogface | History of the World | Page 11 |
| Wolfbane | Outpost | Page 12 |
| Guard Dog | Kremlin | Page 12 |
| Dogged | Silverton | Page 13 |

Contents (cont.)

| | |
|--------------------|---------|
| Trivia Quiz | Page 14 |
| Pedagoguery | Page 14 |

Game Openings

Shepherd. Machiavelli. Scenario and specific rules to be determined at game start by player vote, as usual. Have Cary Nichols, Bob Robles, Pasquale Giovine, Forest Cole, Mike Scott, John Biold. Need up to 2 more. **I will start this next issue with however many are signed up by then.**

Dogwood. History of the World. This will start when Dogface ends. Have Dave Anderson, Forest Cole, Kevin Wilson, Andy Lewis, and Dennis Cain, need 1 more.

Retriever. Outpost. This will start when Wolfbane ends or when I get 10 players, whichever comes first. Have Eric Brosius, Andy York, Andy Lewis, Dave Partridge, Scott Hutchens, Bill Scharf, Kevin Wilson, and Michael Lowrey, will take up to 2 more.

Wish List

Seafarers of Catan. We will be playing the Oceans scenario. Have Kevin Wilson and Dave Partridge, will take up to 4 more.

New World. This game will start after Doggerel ends. Have Andy York, Dennis Cain, and Bob Robles, need up to 3 more.

Age of Renaissance. This game will start after Dog Show ends. Have Bob Robles, need up to 5 more.

Merchant of Venus. This game will start after Hyena ends. Have Scott Hutchens, Chris Geggus, and Bob Robles, need up to 3 more.

Liftoff! This is a playtest of the Mars Landing Variant I have devised. The link to the rules is on the main page of the website (I can send you a hard copy if you don't have web access). Have Andy York, need up to 3 more.

Industrial Waste. This is a simple game of building industrial production and trying to deal with its consequences. The rules are available on my website (the link is on the main page) or in hard copy form on request. Need 4.

In general, game ownership is recommended, but not required.

Note that a subscription to S.O.B. is not required to play in a game run by flier, but that a game fee will be charged to non-subbers.

S.O.B. is a zine of unusual postal games, and anything else I feel like including. Your publisher is:

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Subscriptions cost \$1.50 per issue (\$2.25 overseas).

**Howling at the Moon
The S.O.B. Letter Column**

Bob Robles

Book review: Black House by Stephen King and Peter Straub: More collaborative horror from the authors of 'The Talisman'. This story recycles some old characters who are older and mixes the usual blend of the mundane turned terrifying. If you like Stephen King, Peter Straub or 'The Talisman', then this is for you.

Joe Carl

I got Sid Meiers Civilization boardgame for Christmas and finally had a chance to play it myself. I and the group of friends I played with enjoyed the game a lot actually. We used the Basic rules and it was very enjoyable. The advanced rules seem interesting as well but have not tried it out yet, it's too tough to play solo to play test, but with individual players it wouldn't be bad at all. I thought it was very well balanced and would recommend the game to any avid boardgamer.

Off the Leash

Advanced Game, Plague, Famine, Special Military Units, Conquest, Moneylenders, Gray Press, Ultimate Victory, Gunboat Miller Number 2001Fpw10 Fall 1458

Deadline for Winter-Spring 1459: 4/1 Tuesday

The Turks are on the Ropes as Venice has firmly established itself in the Balkans, France appears to have gotten its house in order (more or less) and is starting to expand southward. Naples is trying to organize the Turks and Florence against Venice, but the Turks may be beyond help and Florence seems uninterested. Austria is moving against Venice and Milan receives some Venetian help.

Summer 1458 Retreats

Austrian A Trent retreats to Bergamo

Outstanding Debt

None

Orders

- AUSTRIA : A AUSTRIA to Tyrolea, A CARINTHIA to Trent, A Slavonia to CARNIOLA, A CROATIA supports Turkish A Bosnia to Dalmatia (cut), A BERGAMO to Cremona
- FLORENCE : A LUCCA to PISTOIA, A FLORENCE to Urbino
- FRANCE : A TYROLEA supports A Turin to Como (cut), A Turin to Como, A PAVIA to PARMA, A Montferrat to PAVIA, F GULF OF LIONS supports F Corsica to Sardinia, F SAVOY to LIGURIAN SEA, F Corsica to SARDINIA
- MILAN : A CREMONA supports A Milan (cut), A MILAN supports A Trent, A TRENT holds
- NAPLES : A ROME holds (Rebellion suppressed), A Otranto to SALERNO, A URBINO supports Florence A Lucca to Bologna (nso), A AQUILA holds (Rebellion suppressed), F PALERMO holds (Rebellion suppressed), F Ionian Sea to GULF OF NAPLES, F BARI supports F Lower Adriatic, F LOWER ADRIATIC supports Turkish F Central Mediterranean to Ionian Sea, F TYRRHENIAN SEA to Sardinia
- TURKS : A BOSNIA to Dalmatia, F WESTERN MEDITERRANEAN to Sardinia, F Central Mediterranean to IONIAN SEA
- VENICE : A BOLOGNA supports A Mantua, A MANTUA supports A Bologna, A VERONA supports Milan A Trent, A FRIULI supports A Verona, F UPPER ADRIATIC to Croatia, F DALMATIA supports F Upper Adriatic to Croatia (cut), F RAGUSA supports F Albania, F ALBANIA supports F Durazzo, F DURAZZO supports F Albania

Press

Austria – France: Milan is yours.

Austria – Milan: You are France's, pretty-boy. Your ass is grass.

Austria – Turks: Come on up!

Austria – Venice: OK, I'll stop attacking you if you stop attacking me. Deal? But Milan must die.

France – Austria: I think that you made the right choice. We must finish with Milan very early and begin to put our forces to contrast the brown armies.

France – Florence: You should come in the war against the winning Venice as soon as possible.

France – Milan: Dear neighbour, it isn't Austria the danger, but the other your eastern neighbour.

France – Naples: It seems that Turkey will be out in few moves, while Venice becomes bigger and bigger, thus we must ally against him. I shall stop my fleets where they are now, but Tunis has not to finish in Venetian hands, you should provide to this. I am moving in the north towards his position to stop his expansion.

France – Turkey: Dear friend, sorry for my moves, but it seems that Venice will finish with you very early and I prefer to have sure boundary against him. On the

contrary, if you will return in the game in this fall, I shall leave your isle free for you during buildings.

Milan – Austria: Evil Green Swab? Certainly you can do better than that!

Milan – France: Glad to see that you're getting your house in order. Now, move east to help me remove the foreigners from Italian soil. Well, that and straight south for those from Ottoman lands.

Milan – Turks: I'm sorry that my refusal to turn over and submit to occupation is disrupting your plans for world dominance. The Milanese will fight to the end!

Naples – Austria: Careful there, don't get too spread out. Looking good otherwise.

Naples – Florence: My move to Urb was to block an expected further Venice move south... Do you wish it to move out, or support you?

Naples – France: Pesky pitiful rebellions! What say we throw them all into a pile and let them see what they can do then?

Naples – Milan: Sure hope you can make something of your position.

Naples – Turks: Oops, my error in not getting out of IS last turn! Not much to be done there anymore, he's got you it sure looks like.

Naples – Venice: OK, good job! Now move against the Austrian as you said, keep working north...I'm a watching...

Turks – France: I hope Milan realizes just who the danger is.

Turks – Milan/Florence: If you want back in the game, attack Venice.

Turks – Naples/Austria: Hope you all supported me into Dalmatia. Told you the Doge was evil.

Turks – Venice: Blah, blah, blah. You would've attacked anyway. I just forced your hand, now the alliance is set against you as it should be.

Venice – Austria: I don't want war with you and hope you feel likewise. I will respect the boundaries we have right now if you refrain from attacking me.

Venice – Naples: We are both fairly strong and by attacking each other would only weaken each other. Turkey sealed his own fate by preemptively attacking me. If you want to let him live in the west that is your choice. We need to be careful as powers to the north are looking pretty strong right now. Shall we officially ally?

Venice – Turks: I gave you two or three chances to stop attacking me and you would not desist. Should I have not defended myself?

Spring 1459 Famine

Poor Year – Column Only. Ancona, Tunis, Siena, Como, Capua, Carniola.

Spring 1459 Income

Provinces and cities that are underlined do not produce income while those that are in italics could change hands depending on retreats.

Provinces

| | | |
|-----|---|----|
| AUS | Austria, Hungary, Carinthia, Slavonia, <u>Carniola</u> , Croatia, Bergamo | 6 |
| FLO | Modena, Lucca, Pisa, <u>Pistoia</u> , Florence, Arezzo, <u>Piombino</u> | 5 |
| FRA | Avignon, Swiss, Marseilles, Provence, Turin, <u>Saluzzo</u> , Savoy, Genoa, Montferrat, Pavia, <u>Fornova</u> , Corsica, Parma, Sardinia, <u>Como</u> , Tyrolea | 13 |
| MIL | Milan, Cremona, Trent | 3 |
| NAP | Patrimony, Perugia, Rome, Spoleto, Urbino, <u>Ancona</u> , Aquilla, | 12 |

Capua, Naples, Salerno, Bari, Otranto, Messina, Palermo

TUR Tunis, Herzegovina, Bosnia

VEN Verona, Bologna, Mantua, Padua, Treviso, Friuli, Ferrara, Istria, Dalmatia, Durazzo, Albania, Ragusa

Seas

FRA Gulf of Lions, Ligurian Sea

NAP Lower Adriatic, Gulf of Naples, Tyrrhenian Sea

TUR Western Mediterranean, Ionian Sea

VEN Venice, Upper Adriatic

Cities

AUS Austria, Hungary, Carniola, Croatia

FLO Modena, Lucca, Pisa, Florence (3), Arezzo, Piombino

FRA Avignon, Swiss, Marseilles, Turin, Saluzzo, Savoy, Genoa (3), Montferrat, Pavia, Corsica, Sardinia, Tyrolea

MIL Milan (3), Cremona, Trent

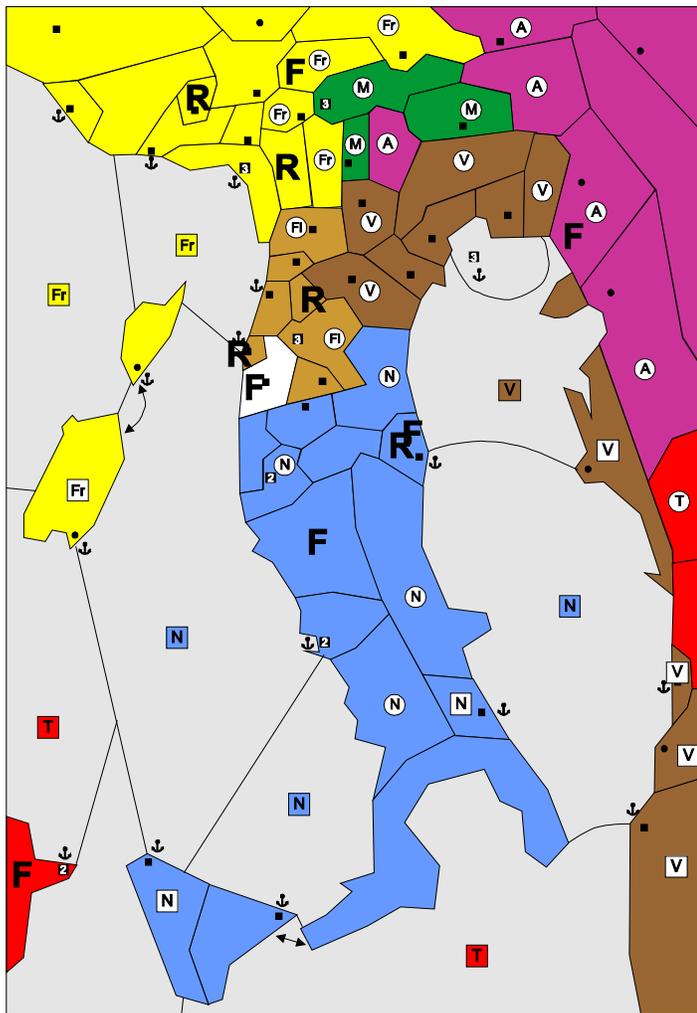
NAP Perugia, Rome (2), Ancona, Naples (2), Bari, Messina, Palermo

TUR Tunis (2)

VEN Bologna, Mantua, Padua, Treviso, Ferrara, Dalmatia, Durazzo, Albania, Ragusa, Venice (3)

Totals

Off the Leash



○ Army □ Fleet ◇ Garrison ◆ Autonomous Garrison ◆ Besieged Garrison

S.O.B.

Variable income die roll was 4.

2

12

2

3

2

2

3

7

13

5

8

0

12

| | Variable | Provinces | Seas | Cities | Gross |
|-----|----------|-----------|------|--------|-------|
| AUS | 3 | 6 | 0 | 3 | 12 |
| FLO | 6 | 5 | 0 | 7 | 18 |
| FRA | 7 | 13 | 2 | 13 | 35 |
| MIL | 4 | 3 | 0 | 5 | 12 |
| NAP | 3 | 12 | 3 | 8 | 26 |
| TUR | 4 | 2 | 2 | 0 | 8 |
| VEN | 8 | 12 | 2 | 12 | 34 |

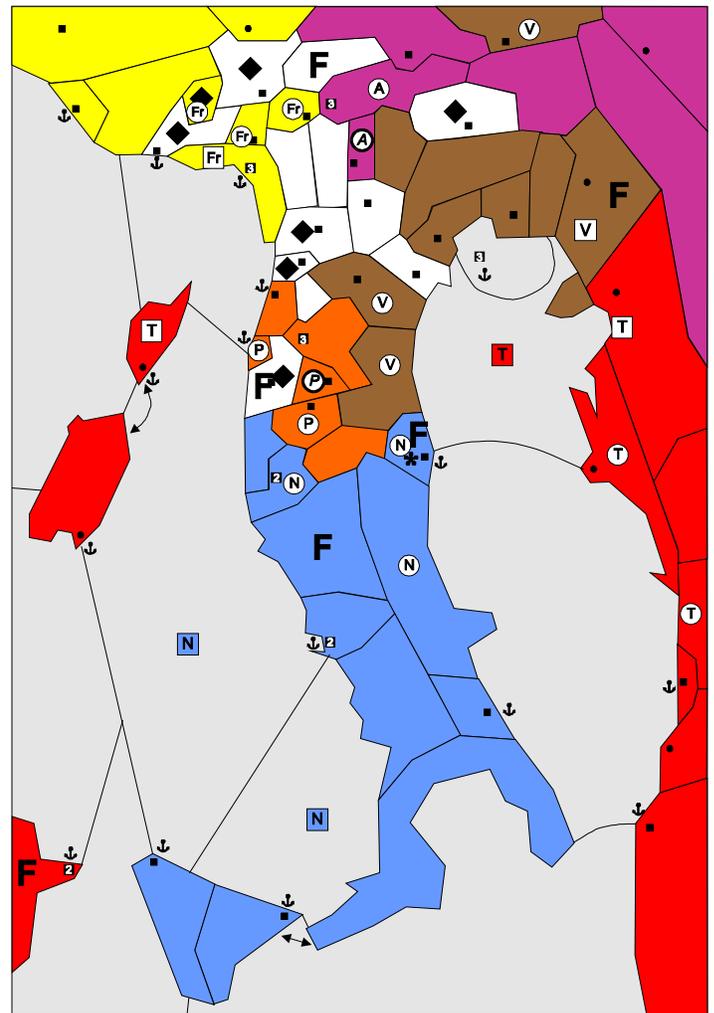
Your treasury:

Your ducat total:

Game Summary

| | 1454 | 1455 | 1456 | 1457 | 1458 | 1459 |
|-----|------|------|------|------|------|------|
| Aus | 3 | 2 | 3 | 4 | 5 | 4 |
| Flo | 3 | 6 | 8 | 7 | 6 | 6 |
| Fra | 3 | 7 | 8 | 9 | 10 | 12 |
| Mil | 3 | 5 | 5 | 2 | 2 | 3 |
| Nap | 4 | 4 | 5 | 6 | 7 | 7 |
| Pap | 4 | 3 | 2 | 2 | 0 | 0 |
| Tur | 3 | 5 | 5 | 6 | 4 | 1 |
| Ven | 4 | 6 | 7 | 6 | 9 | 10 |

Wild Dog



○ Army □ Fleet ◇ Garrison ◆ Autonomous Garrison ◆ Besieged Garrison

Wild Dog**Advanced Game, Plague, Famine, Special Military Units, Conquest, Moneylenders, Black Press, Ultimate Victory
Miller Number 2002Fpw10
Fall 1455****Deadline for Winter-Spring 1456 4/1, Tuesday**

The governments of Florence and Milan flee into exile as their homelands are overrun. Venice moves into the Austrian capitol while the Turks continue to move northward into Venetian territory. Naples forces the Pope to relocate his palace from Rome and France opens a revolving credit line with the moneylenders.

Expenditures

France pays back his loan to the moneylenders, and borrows 10 ducats for 1 year.

Outstanding Debt

Summer 1456: 38 ducats due from the Pope

Fall 1456: 12 ducats due from Austria, 30 ducats due from Florence, 23 ducats due from Milan.

Summer 1457: 26 ducats due from Austria

Fall 1457: 12 ducats due from France.

Orders

AUSTRIA (Wilson): A Trent to MILAN, A (EM) CREMONA supports A Trent to Milan

FLORENCE (Biehl): No units, **OUT!**

FRANCE (Partridge): A Provence to SALUZZO, A PAVIA supports A Montferrat, A MONTFERRAT supports A Pavia, F GENOA holds

MILAN (Robles): A Fornova to MODENA, A PARMA supports A Fornova to Modena **OUT!**

NAPLES (Scharf): A Rome holds, A Spoleto to ANCONA, A AQUILA supports A Spoleto to Aquila, F TYRRHENIAN SEA to Rome, F GULF OF NAPLES to Rome (imp.)

PAPACY (Carl): A PERUGIA to Arezzo, A PIOMBINO holds, A (EM) AREZZO to Florence

TURKS (Narhi): A Herzegovina to DALMATIA, A Albania to HERZEGOVINA, F Lower Adriatic to UPPER ADRIATIC, F Dalmatia to CROATIA, F CORSICA holds

VENICE (Whyte): A Carinthia to AUSTRIA, A BOLOGNA supports A Urbino to Florence, A URBINO to Florence, F Ancona holds (DISLODGED, retreat Lower Adriatic, garrison, OTB), F CARNIOLA holds

Notes

Since Florence and Milan no longer control any of their home cities, they have been eliminated.

Press

Austria – France and the Papacy: If Venice wants to go it alone, then we let him. But the rest of us should stick together or we'll all be conscripted into the Sultan's Neapolitan Merchant Service. Hey Pope, can't you get the Catholic Neapolitans to turn on those heathen Turks? (Or was the area Turkey occupied at that time still Christian? I need to review my history).

Austria – Milan: Nothing personal but I thought we had a deal.

Austria – Venice: Picking on your plague-ridden, debt-burdened, enemy-besieged neighbors I see. Well, those N/T fleets sailing north into all our backyards should catch your attention some too. I think we need to back-off and regroup here. I hope you agreed.

Milan – Austria: Ouch!

Milan – Austria: You double-crossing bastard. I really WAS trying to help you. But if that's your gratitude, then I'm siding with Venice and taking you out you perfidious animal.

Papacy – Naples: The threat is no longer Venice, but Turkey. Guard your cities from his rapacious hordes!

Papacy – Venice: Think very, very carefully before you weaken me further. I will survive and you could use help against Turkey and Naples. If you spurn me yet again, I will be their puppet instead.

Venice – Naples: Naughty Spoleto! He's a gonna geta his bottom spanked!

Venice – Pappy: Look, Pops, I'm gonna make you hold in Arezzo until you control it, and so knock the Florentine out. Don't try to wangle a way back into the game for him, that was not what we agreed.

Venice – Turk: You talked to Austria and believed him? What a dupe! Do I have to talk to you to persuade you I'm not attacking you? Ok, I'm talking. Now I'm NOT attacking you, so go AWAY. Or I will be FORCED to attack you to repossess what is rightfully mine.

Spring 1456 Famine

Poor Year – Column only: Ancona, Tunis, Siena, Como, Capua, Carniola

Spring 1456 Income

Provinces and cities that are underlined do no produce income while those that are in italics could change hands depending on retreats.

Provinces

| | | |
|-----|---|---|
| AUS | Tyrolea, Hungary, Carinthia, Slavonia, Milan, Cremona | 6 |
| FRA | Avignon, Swiss, Provence, Marseilles, Pavia, Montferrat, Genoa, Saluzzo | 8 |
| NAP | Palermo, Messina, Otranto, Bari, Salerno, Naples, Aquila, <u>Capua</u> , Patrimony, Rome, <u>Ancona</u> | 9 |
| PAP | Spoleto, Perugia, Florence, Pisa, Arezzo, Piombino | 6 |
| TUR | Sardinia, Corsica, <u>Tunis</u> , Durazzo, Albania, Ragusa, Herzegovina, Bosnia, Dalmatia, Croatia | 9 |
| VEN | Bergamo, Verona, Friuli, Treviso, Padua, Bologna, Urbino, Istria, <u>Carniola</u> , Austria | 9 |

Seas

| | | |
|-----|--------------------------------|---|
| NAP | Tyrrhenian Sea, Gulf of Naples | 1 |
| TUR | Upper Adriatic | 1 |
| VEN | <i>Lower Adriatic</i> , Venice | 2 |

Cities

| | | |
|-----|--|---|
| AUS | Tyrolea, Hungary, Milan (3), Cremona | 6 |
| FRA | Avignon, Swiss, Marseilles, Pavia, Montferrat, Genoa (3) | 8 |
| NAP | Palermo, Messina, Bari, Naples (2), Rome (2), <u>Ancona</u> | 7 |
| PAP | Perugia, Florence (3), Pisa, Arezzo, Piombino | 7 |
| TUR | Sardinia, Corsica, <u>Tunis</u> (2), Durazzo, Albania, Ragusa, Dalmatia, Croatia | 7 |
| VEN | Treviso, Padua, Bologna, <u>Carniola</u> , Austria, Venice (3) | 7 |

Totals

Variable income die roll was 1.

| | Variable | Provinces | Seas | Cities | Treasury |
|-----|----------|-----------|------|--------|----------|
| AUS | 1 | 6 | 0 | 6 | 0 |
| FRA | 2 | 8 | 0 | 8 | 10 |
| NAP | 1 | 9 | 2 | 7 | 4 |
| PAP | 2 | 6 | 0 | 7 | 0 |
| TUR | 1 | 9 | 1 | 7 | 3 |
| VEN | 4 | 9 | 2 | 7 | 0 |

Your treasury:

Your ducat total:

Game Summary

| | 1454 | 1455 | 1456 |
|-----------|------|------|------|
| Austria: | 3 | 4 | 4 |
| Florence: | 3 | 1 | 0 |
| France: | 3 | 4 | 6 |
| Milan: | 3 | 2 | 0 |

S.O.B.

| | 1454 | 1455 | 1456 |
|---------|------|------|------|
| Naples: | 4 | 4 | 6 |
| Papacy: | 4 | 3 | 5 |
| Turks: | 3 | 5 | 8 |
| Venice: | 4 | 6 | 6 |

Warg

Miller Number 2002Ets33

3019-2-II

Deadline for 3019-3-I 4/1, Tuesday

Umbar appears to strike out at everyone, moving against the Elves, Gondor, and Mordor! Saruman finally takes Druwaith Iaur from Gondor and is poised to move into the heart of Eriador. Rohan rides into the citadel of the Necromancer and the Dwarves hold on in the north.

3019-2-I Retreats

Dwarfish A Carn Dum retreats to North Downs

Fellowship retreats to Weather Hills

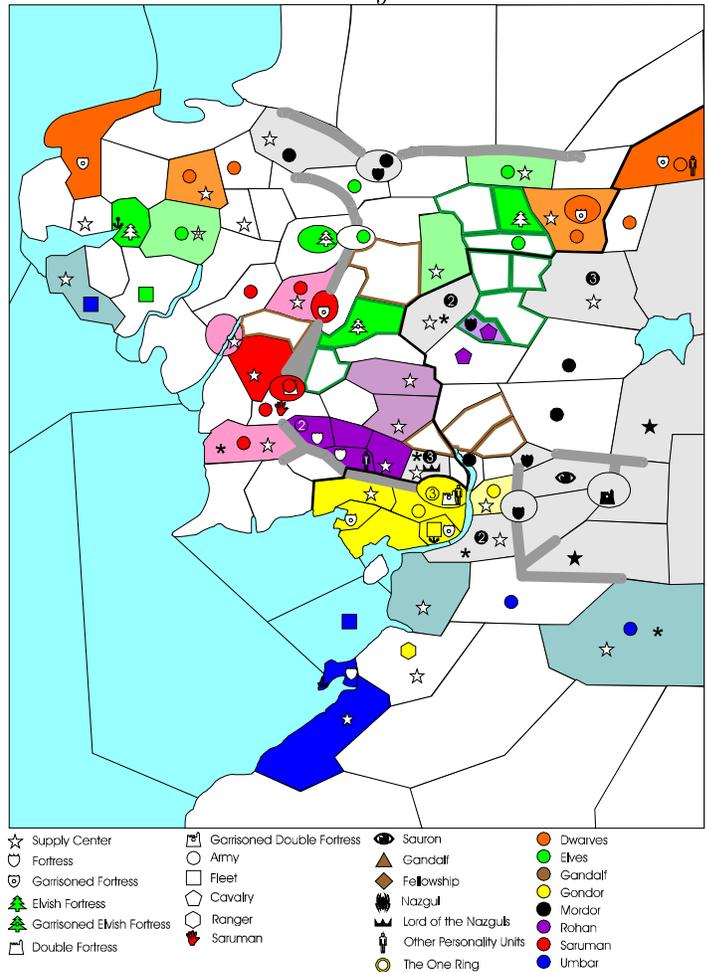
Orders

- DWARVES (Reynolds): A Forochel to FORNOST ERAIN, Dain leads A IRON HILLS supports A Carnen, A CARNEN supports A Erebor to Esgaroth, A NORTH DOWNS to Bree, A Erebor to ESGAROTH
- ELVES (Koehler): A OLD FOREST ROAD to RIVER RUNNING, A Anduin supports Rohan C Brownlands to Dul Guldur (nso, DISLODGED, retreat Mountains of Mirkwood, Central Mirkwood, Carrock, Gladden Fields, Lorien, Celebrant, OTB), A Beorn's Marches to ANGMAR, A SHIRE to Bree, A Rhuadur to HIGH PASS, A EOTHED supports Dwarf A Erebor to Esgaroth, F SARN FORD to Shire, R ()
- GANDALF (Bolduc): R (), R (), Fe (), Aragorn (), Gandalf ()
- GONDOR (York): Faramir leads 3A MINAS TIRITH hold, A OSGILIATH to South Ithilien, C Druwaith Iaur to Enedwaith to Dunland (DISLODGED, retreat Andrast, Anfalas, OTB), A Dor-en-Emil to LOSSARNACH, F PELAGIR to Ethir Anduin, R Poros to HARAD Neutralizes Harad
- MORDOR (Anderson): 4A Caer Andros D: Lord of the Nazgul leads 3A Caer Andros to ANORIEN, A CAER ANDROS to Minas Tirith, 3A North Rhun to RIVER RUNNING, A River Running to WILDERLAND, A Khand holds (DISLODGED, retreat Near Harad, Far Harad, Nuriad, Nurn, OTB), A CARN DUM supports A Gundabad, A GUNDABAD supports A Carn Dum, 2A Minas Morgul to SOUTH ITHILIE, Sauron Minas Morgul to GORGOROTH, 2A Dul Guldur to ANDUIN, A DAGORLAND to Brownlands, Nazgul ()
- ROHAN (Scharf): C Wold to Emyrn Muil to BROWNLANDS, C Brownlands hold to DUL GULDUR, 2A HELM'S DEEP holds, A Anorien supports Gondor 3A Minas Tirith (Dislodged, retreat Eastmarch, Entwash, OTB), Theoden DUNHARROW holds, Eowyn ()

Orders (cont.)

- SARUMAN (Robles): Saruman leads A GAP OF ROHAN supports A Enedwaith to Druwaith Iaur, A ISENGARD holds, A Enedwaith to DRUWAITH IAUR, A Tharbad to CARDOLAN, A HOLLIN supports A Tharbad to Cardolan
- UMBAR (Nichols): F Western Sea to Harlindon, F Southern Bay to Ethir Anduin, A Poros supports Haradwaith to Khand, A Haradwaith to Khand, C South Ithilien supports A Poros

Warg



Adjustments

| | | |
|----------|---|-----------|
| DWARVES: | HOME, Esgaroth, Carn Dum , +Fornost Erain | Even |
| ELVES: | HOME, Carrock, Anduin , Harlindon , +Shire, +Eothed | Even |
| GANDALF: | None | No change |
| GONDOR: | HOME, South Ithilien , Druwaith Iaur , +Osgiliath | Lose 1 |
| MORDOR: | Gundabad, Dol Guldur , South Rhun, Udun, Barad-dur, Minas Morgul, Nurn, River Running, Osgiliath , Khand , +Carn Dum, +South Ithilien, +Anorien, +Anduin | Gain 1 |
| ROHAN: | HOME, East Emnet, Wold, +Dol Guldur | Gain 1 |
| SARUMAN: | HOME, Hollin, Tharbad, +Druwaith Iaur | Gain 1 |

| | | |
|--------|--|--------|
| UMBAR: | City of the Corsairs, Havens of Umbar, Harad , South Gondor, +Khand, +Harlindon | Gain 1 |
|--------|--|--------|

Alignment**Good:** Dwarves, Elves, Gandalf, Gondor, Rohan**Neutral:** Saruman, Umbar**Evil:** MordorPress**Sauron – Elves, Dwarves, and Gandalf:** You guys want Gundabad, really gundaBAD!!!**Sauron – Gandalf:** Well, I see I have found you and you brought somebody along to help you with your walking stick.**Sauron – Gondor:** I'll be back. I have to go to Dunharrow first.**Sauron – Rohan:** It is time for me to stop horsing around with you.Hyena**End of Game Statements**

Chris Geggus Congratulations to Andy yet again. I could only hope that he misjudged his last turn to give me any chance. Even less chance of an NMR! I've been watching Andy closely and I still have to say that he doesn't seem to have an obvious strategy. He can adapt to the board and set-up quicker than the rest of us I guess. Ports fine, even if no-one is using them, but how does he get so much money so quickly? Please put me down for the next one - I'm gonna beat him this time! Thanks for the GM'ing as well - as efficient as ever.

Bob Robles Well, I watch and learn from the more experienced players.

Dog Show

Turn 7, Phase 7 and Turn 8, Phases 1 through 3
Deadline for Turn 8, Phases 4 through 6: 4/1 Tuesday

Turn 7, Phase 7 – Purchase Tokens

London buys 0 tokens

Paris buys 15 tokens

Venice buys 20 tokens

Barcelona buys 25 tokens

Genoa buys 20 tokens

Turn 8, Phase 1 – Draw Cards

Done

Phase 2 – Buy Cards

Paris buys _____

Phase 3 – Play Cards

London plays Cloth (Paris gains \$20, Genoa and Venice each gain \$5, surplus removed), Prince Henry (protected, gains \$60 in rebates), Christopher Columbus (\$10 protection, gains \$80 in rebates), Leonardo da Vinci (\$10 protection, gains \$30 in rebates), and War on Venice (London dr = 1+1 for Nationalism = 2, Venice die roll = 6 + 1 for Nationalism = 7). Venice wins. London Misery increases to 90, Venice to 80. London cedes Tana, Varna, Sarai, Iceland, and Waterford.

Paris plays Mongol Armies (gains \$10, Crusades now an unplayable Misery burden), Marco Polo (no protection, gains \$50 rebate), Desiderius Erasmus (no protection, gains \$30 rebate), Cloth (Paris gains \$45, Genoa and Venice gain \$20, London gains \$5), Mysticism Abounds (Paris Misery increases to 100, Genoa to 200, Venice to 125, Barcelona to 150, and London to 100).

Genoa plays Metal (London gains \$24, Paris, Barcelona, and Genoa each gain \$6).

Venice plays Wine (Barcelona gains \$45, Venice gains \$20, and Paris gains \$5), Wine (Barcelona gains \$45, Venice gains \$20, and Paris gains \$5), Wool (Venice gain \$32, and Barcelona and London gain \$8 each), and Nicolaus Copernicus (\$15 protection).

Barcelona plays Pirates/Vikings, reducing Chester, Portsmouth, and York

The Players

| Player | Country | Misery | Tokens | Money | Order | Dominance | Ships | Advances |
|---------------|-----------|--------|--------|-------|-------|-----------|-------|---|
| Caleb Cousins | Paris | 100 | 15 | \$238 | 2 | 9 | 10 | A, B, E, F, I, J, K, N, O, R, S, V, W |
| Ward Narhi | Genoa | 200 | 20 | \$161 | 3 | 9 | 6 | I, J, K, L |
| Paul Bolduc | Venice | 125 | 20 | \$165 | 4 | 18 | 8 | A, E, F, I, N, R, V, W |
| Bob Robles | Barcelona | 150 | 25 | \$202 | 5 | 14 | 10 | A, F, H, I, J, N, S, V, W |
| Dennis Cain | London | 100 | 0 | \$265 | 1 | 9 | 3-0 | A, B, C, E, F, I, J, K, L, N, O, R, S, T, U, V, X |

Players are listed in tie breaking order.

Cards

Your cards are: _____

Commodity Log

| Commodity | Ward | Bob | Paul | Caleb | Dennis |
|------------|------|-----|------|-------|--------|
| Stone (2) | 2 | 3 | 1 | -- | -- |
| Wool (3) | -- | 2 | 4 | -- | 1 |
| Timber (4) | -- | 2 | 2 | -- | 1 |

| Commodity | Ward | Bob | Paul | Caleb | Dennis |
|----------------|------|-----|------|-------|--------|
| Grain (5) | 1 | 1 | 1 | 1 | 2 |
| Cloth (6) | 2 | -- | 2 | 3 | 1 |
| Wine (7) | -- | 3 | 2 | 1 | -- |
| Metal (8) | 1 | 1 | -- | 1 | 2 |
| Fur (9) | -- | -- | 2 | 1 | 1 |

S.O.B.

| Commodity | Ward | Bob | Paul | Caleb | Dennis |
|------------|------|-----|------|-------|--------|
| Silk (10) | -- | 2 | 1 | -- | 1 |
| Spice (11) | -- | -- | 1 | 1 | 3 |
| Gold (12) | 1 | -- | 1 | 1 | 2 |
| Ivory (12) | 2 | 1 | 1 | -- | -- |

Surplus, Shortage

Doggerel

Turn 10

End of Game Statements due: 4/1 Tuesday

Planning

Dutch maintains 3 ships (\$12) and buys 3 soldiers (\$30) for \$42.
English maintains 4 ships (\$16) and buys 3 soldiers (\$30) for \$46.
French maintain 7 ships (\$28) and buys 2 soldiers (\$20) for \$48.
Portuguese maintain 5 ships (\$20), and buys 6 soldiers (\$60) for \$80.
Spanish maintains 7 ships (\$28) and buys 8 soldiers (\$80) for \$108

Outbound Naval Movement

Dutch move to N. Dice: 1, 3, 6, 6. Loses one ship containing one soldier and one colonist. Drops off 2 soldiers and 2 colonists. Move to O. Dice: 1, 5. Loses 1 ship.
English move to O. Dice: 3, 3, 3. No losses. Drops off 4 colonists. Move to J. Dice: 4, 4. No losses.
French move to J. Dice: 4, 4, 6. No losses.
Portuguese move to R. Dice: 2, 4, 4, 6. No losses.
Spanish move to Y. Dice: 2, 2, 3, 3, 6. No losses. Drops off 1 colonist and 2 soldiers. Move to Z. Dice: 5, 6. No losses. Drops off 2 soldiers. Move to S. Dice: 2, 4, 6, 6. No losses.

Mining

Dutch mine 1 gold in O (depletes) and Q. French loot 3 gold in F (depletes) and mine 1 gold in L.

Discovery

English discover mine in G.

Land Movement

English move 4 soldiers and 6 colonists from G to J, 3 soldiers and 4 colonists from K to J, 1 soldier and 5 colonists from H to G, 2 soldiers and 4 colonists from H to K, 4 colonists from anchorage dot to O, and 3 soldiers from fleet to J.
Dutch move gold from O to fleet, 4 soldiers and 5 colonists from O to N, 3 soldiers from O to Q, 3 soldiers and 1 colonist from Q to T, 1 soldier and 1 gold from Q to O, and 2 colonists and 2 soldiers from fleet to O.
Spanish move 1 soldier and 1 colonist from V to W, 1 colonist from V to Y, 1 colonist from V to S, 1 colonist and 2 soldiers from anchorage dot to Y, 2 soldiers from anchorage dot to Z, and 4 soldiers and 3 colonists from anchorage dot to S.
Portuguese move 1 gold from R to fleet, 8 soldiers from R to T, 8 soldiers and 4 colonists from fleet to R.
French move 4 gold from J to fleet, 3 gold from F to J, 1 gold from L to J, 1 colonist and 1 soldier from J to F, 2 colonists from I to F, 1 colonist from I to L, 2 soldiers from J to L, and 2 soldiers and 4 colonists from fleet to J.

Combat

Portuguese attack the Dutch in T. Portuguese lose 2 soldiers, Dutch lose 2 soldiers and 6 colonists. **France** attacks the English in J. French lose 3 soldiers, English lose 1.

Native Combat

Dutch: 1 native killed in N. **French:** 1 soldier and 2 natives killed in I.

Native Uprisings

Climate is a 6. No uprisings.

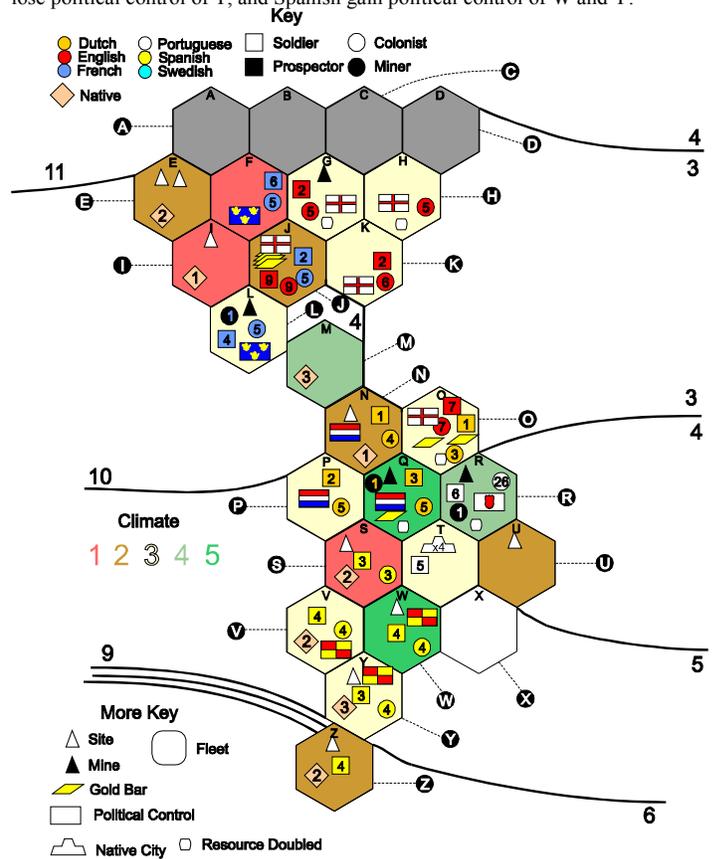
Survival

Climate is a 4.

French lose 1 colonist and 1 soldier in F, 2 soldiers in I, and 1 colonist in J. **English** lose 1 soldier O, and 1 colonist in J. **Dutch** lose 1 soldier each in N and O. **Portuguese** lose 1 soldier in T. **Spanish** lose 1 colonist and 1 soldier in S, 1 soldier Y, and 1 colonist in Z.

Political Control

French gain political control of F, English gain political control of J and O, Dutch lose political control of T, and Spanish gain political control of W and Y.



Homebound Naval Movement

English: Dice: 2, 3, 5, 6. No losses.
Dutch: Dice: 2, 3, 5. No losses.
Spanish: Dice: 3, 3, 3, 3, 4, 4, 5, 5, 6. No losses.
Portuguese: Dice: 1, 1, 3, 5. 3 ships (including 1 gold) lost.
French: Dice: 2, 3, 4, 5. No losses.

Income

Dutch: Political Control: \$160, gold: \$40, resources: \$75.
English: Political Control: \$240, resources: \$147.
Spanish: Political Control: \$160, resources: \$45.
Portuguese: Political Control: \$80, resources: \$156.
French: Political Control: \$120, gold: \$160, resources: \$45.

Notes

With that, we end the game. Andy Lewis wins with the most money.
 Congratulations to Andy.

Players

| Country | Player | Money |
|------------|--------------|--------|
| English | Andy Lewis | \$1529 |
| Dutch | Andy York | \$1302 |
| French | Kevin Wilson | \$969 |
| Portuguese | Bob Robles | \$636 |
| Spanish | Cary Nichols | \$249 |

Watchdog

1964

1965 due: 4/1 Tuesday

Event Card Resolution/Held Event Cards

Masters of Time and Space performs counter-espionage on Skyliners' one person module program.

Texas Combine. Scientific Breakthrough on two person capsule (2, 2, 3, 4, 6, 6) = +23%.

Republic of Texas. Fortunate accident (capsule). Scientist defects to Skyliners.

Purchase Hardware

Masters of Time and Space buys 2 interplanetary satellites for 8MB, 3 two stage rockets for 36MB, 2 two person capsules for 12MB, 2 kickers for 6MB, and 2 liquid fuel strap-ons for 6MB.

Republic of Texas buys 3 two stage rockets for 36MB, 1 two person capsule for 6MB, 1 interplanetary satellite for 4 MB, and Liquid Fuel Strap-on program for 12MB.

Texas Combine buys 2 one stage rockets for 6MB, 3 one person capsules for 6MB, 1 docking module for 2MB, and the Interplanetary Satellite program for 24MB.

Skyliners hires 3 new astronauts (Jack, Asada, Pollo) for 6MB, buys 1 two stage rocket for 12MB.

Conduct Research

Masters of Time and Space D: 6 dice (2, 2, 2, 3, 5, 6) = +20% to Max R&D. 12MB spent. F: 7 dice (1, 2, 4, 4, 4, 6, 6) = +27 to Max R&D. 7MB spent. b: 8 dice (1, 3, 4, 4, 5, 6, 6, 6) = +35% to Max R&D. 16MB spent. e: 8 dice (1, 1, 2, 2, 2, 5, 6) = +21%. 32MB spent.

Republic of Texas 3: 4 dice (2, 3, 4, 4) - 4% = +9%. 16MB spent. F: 8 dice (1, 1, 1, 3, 3, 4, 6, 6) - 8% = +17%. 8MB spent. D: 8 dice (1, 2, 2, 4, 4, 5, 6, 6) - 8% = +22%. 16MB spent. b: 8 dice (2, 2, 4, 5, 6, 6, 6, 6) - 8% = +29% to R&D Max. 16MB spent.

Texas Combine a: 8 dice (1, 1, 1, 1, 3, 5, 6, 6) = +24% to Max R&D. 8MB spent. b: 8 dice (1, 2, 2, 2, 4, 4, 5, 6) = +26% to Max R&D. 16MB spent. 2: 7 dice (1, 1, 2, 3, 3, 6, 6) = +22%. 21MB spent.

Skyliners None.

Declare Future Missions

Masters of Time and Space declare 3 launches, **Republic of Texas** declares 3 launches, **Texas Combine** declares 3 launches, and **Skyliners** declare 1 launch.

Your mission(s) is(are): _____

Missions

No rushing. Launch order is Skyliners, Skyliners, Skyliners, Texas Combine, Texas Combine, Texas Combine, Republic of Texas, Republic of Texas, Republic of Texas, MOTAS, MOTAS, MOTAS.

Republic of Texas continuation of Mars Flyby. Mars Orbital Burn (25%<92%), Mars Orbital Activities (46%<92%). Mission Success. +1% to 2. +8MB to budget.

Skyliners scrubs a Manned Lunar Pass (Jack, Asada) due to lack of hardware. Mission failure. -10MB to budget.

Skyliners scrubs a Manned Lunar Pass (Carne, Pollo) due to lack of hardware. Mission failure. -10MB to budget.

Skyliners scrubs a Manned Lunar Orbital due to lack of hardware and crew. Mission failure. -10MB to budget.

Texas Combine launches a Manned Orbital with Spacewalk (Roland). Liftoff: (34%<95%), Earth Orbital Burn: (90%>82%) engine nozzle out of control, computers override and gain control, but mission scrubbed, Re-entry: (65%<82%), Recovery: (56%<82%). Mission failure. +1% to A and a, -10MB to budget, Roland to 30%.

Texas Combine launches a Manned Orbital with Docking (King). Liftoff: (63%<92%), Earth Orbital Burn: (49%<83%), Earth Orbital Activities (86%>83%), retro rocket failure, complex problem, EVA required, EVA (01%<49%), repairs successful, Docking Module Power-on (36%<97%), Docking (35%<50%), Earth De-Orbital Burn: (64%<83%), Re-entry: (01%<83%), Recovery (08%<83%). Mission success. +1% to B, 1, and a, +15% to docking, +9MB to budget, King to 50%.

Texas Combine launches a Manned Orbital with Docking and Spacewalk (Torrance). Liftoff (38%<96%), Earth Orbital Burn (70%<84%), Earth Orbital Activities (75%<84%), Docking Module Power-on (73%<98%), Docking (16%<65%), EVA (93%<98%), Earth De-Orbital Burn (73%<84%), Re-entry (21%<84%), Recovery (50%<84%). Mission success. +1% to A and a, +15% to docking, +6MB to budget, Torrance to 50%.

Republic of Texas launches a Docking Module. Liftoff: (62%<98%), Earth Orbital Burn (04%<98%), Earth Orbital Activities (83%<98%). Mission success.

Republic of Texas launches a Manned Orbital with Docking and Spacewalk (Travis). Liftoff: (49%<98%), Earth Orbital Burn (81%<86%), Earth Orbital Activities (35%<86%), Docking Module Power-on (40%<98%), Docking (60%<95%), Spacewalk (79%<98%), Earth De-Orbital Burn (67%<86%), Re-entry (04%<86%), Recovery (86%=86%). Mission success. +1% to a, +3% to docking, Travis to 40%, +6MB to budget.

Republic of Texas launches a Manned Orbital with Docking and Spacewalk (Houston, Navarro). Liftoff: (04%<93%), Earth Orbital Burn (54%<85%), Earth Orbital Activities (87%>85%), retro rocket failure, minor problem, backup systems take over, no effect, Docking Module Power-on (83%<98%), Docking (81%<98%),

Spacewalk (02%<98%), Earth De-orbital Burn (78%<85%), Re-entry (02%<85%), Recovery (66%<85%). Mission success. +1% B and b, Houston to 40%, Navarro to 10% +16MB to budget.

Masters of Time and Space launches a Lunar Satellite Flyby. Liftoff (67%<93%), Earth Orbital Burn (83%<91%), Earth Mission Burn (56%<91%), Lunar Orbital Burn (47%<91%), Lunar Orbital Activities (18%<91%). Mission success. +1% to B and 2, +5% to photoreconnaissance, +2MB to budget.

Masters of Time and Space launches a Manned Orbital (Tom Corbett). Liftoff (25%<93%), Earth Orbital Burn (46%<85%), Earth Orbital Activities (59%<85%), Earth De-orbital Burn (73%<85%), Re-entry (26%<85%), Recovery (45%<85%). Mission success. +1% to A and a, Corbett to 60%, +4MB to budget.

Masters of Time and Space launches a Manned Lunar Pass (Roger Manning, Astro). All safety factors -3% because Lunar Probe Landing mission has been bypassed. Liftoff (97%>91%), last second countdown abort, launch delayed, try again last with a -8%, Liftoff (02%<83%), Earth Orbital Burn (79%<92%), Earth Mission Burn (34%<92%), In-Route Activities (72%<82%), Lunar Mission Burn (18%<92%), In-Route Activities (86%>82%), instrumentation failure, complex problem, cannot be repaired in space, mission continues under ground control, Earth Orbital Burn (47%<92%), Earth Orbital Activities (57%<82%), Earth De-orbital Burn (25%<82%), Re-entry (08%<82%), Recovery (58%<82%). Mission success. +1% to B, F, and 2, Manning to 50%, Astro to 10%, +19MB to budget.

Players

| Player Name | Joe Carl | Cary Nichols | Bill Scharf | Andy York |
|----------------------------|-----------|---------------|---------------------------|-------------------|
| Country | Skyliners | Texas Combine | Masters of Time and Space | Republic of Texas |
| 1964 Budget | 17 | 80 | 143 | 119 |
| Cash | 1 | 3 | 1 | 0 |
| 1-Orbital Satellite | 0 / 91% | 4 / 98% | 0 / 98% | 0 / 98% |
| 2-Interplanetary Satellite | 0 / 65% | 1 / 67% | 1 / 92% | 1 / 93% |
| 3-Lunar Probe | 0 / 70% | | | 1 / 83% |
| 4-Docking Module | 1 / 98% | 1 / 80% | 0 / 85% | 0 / 98% |
| A-One Stage Rocket | 0 / 88% | 0 / 97% | 0 / 94% | 0 / 98% |
| B-Two Stage Rocket | 1 / 97% | 3 / 93% | 2 / 95% | 3 / 95% |
| C-Three Stage Rocket | | | | |
| D-Liquid Fuel Strap-ons | 4 / 70% | | 3 / 85% | 1 / 52% |
| F-Kicker | 2 / 75% | | 2 / 96% | 1 / 52% |
| G-"Mega" Stage Rocket | | | | |
| EVA Suits | 46% | 98% | 91% | 98% |
| a-One Person Capsule | 0 / 81% | 0 / 85% | 0 / 86% | 2 / 87% |
| b-Two Person Capsule | 0 / 20% | 1 / 85% | 2 / 86% | 1 / 86% |
| c-Three Person Capsule | | | | |
| d-Two Person Module | | | | |
| e-One Person Module | 1 / 22% | | 1 / 43% | |
| f-Three Person Minishuttle | | | | |
| h-Four Person Cap/Module | | | | |
| Photo Recon | 65% | 65% | 75% | 65% |
| Launch Facilities | 3 | 3 | 3 | 3 |
| Astronauts | 6 | 6 | 4 | 4 |

Astronauts are: **Skyliners:** Sgetti (50%), Crackers (30%), Carne, Jack, Asada, Pollo (0%); **Republic of Texas:** Travis, Houston (40%); Navarro, (10%) Crockett, (0%). **Texas Combine:** Torrance, King, (50%); Redmon, Roland, (30%); Flagg, (20%). **MOTAS:** Tom Corbett (60%), Roger Manning (50%), Astro, (10%), Buck Rodgers (0%).

1965

Draw Event Cards

Bill Scharf: Corporate investment. Receives 5MB cash. -15MB to budget.

Andy York: Bowie killed in a car accident. -3MB to budget.

Cary Nichols: Corporate investment. Receives 4MB cash. +7MB to budget.

Joe Carl: Major media event. Astronaut recruitment costs only 1MB each for the remainder of the game. +20MB to budget.

Final Positions

| Player Name | Joe Carl | Cary Nichols | Bill Scharf | Andy York |
|-------------|-----------|---------------|---------------------------|-------------------|
| Country | Skyliners | Texas Combine | Masters of Time and Space | Republic of Texas |
| 1965 Budget | 12 | 95 | 169 | 150 |
| Cash | 0 | 25 | 12 | 5 |
| 1966 Budget | 32 | 102 | 154 | 147 |

Pavlov

Turn 4 Bidding to Combat

Turn 4 Combat due: 4/1 Tuesday

Players

| | | | | | | | |
|-----------|---------------|---------------|--------------|---------------|-------------|-------------|---------------|
| ATREIDES: | Cary Nichols | BENE GESSERIT | Bob Robles | BENE TLEILAXU | Paul Bolduc | EMPEROR | Bill Scharf |
| FREMEN | Steve Koehler | GUILD | Kevin Wilson | HARKONNENS | Ward Narhi | GAME MASTER | Chris Hassler |

Turn 4

Bidding

Bene Tleilaxu give _____ to the Atreides
 The Harkonnens play Cone of Silence on everyone but themselves. No players may bid other than the Harkonnens.
 CARD 1 (_____) goes to the Harkonnens for 1 spice (free card: _____)
 Remaining cards return to the deck.

Revival and Movement

Bene Gesserit coexist everywhere. Guild chooses to go last.

Revival

Atreides revive 3 tokens (2 spice to the Bene Tleilaxu)
Fremen revive 3 tokens (1 Fedaykin)
Guild revives 1 token

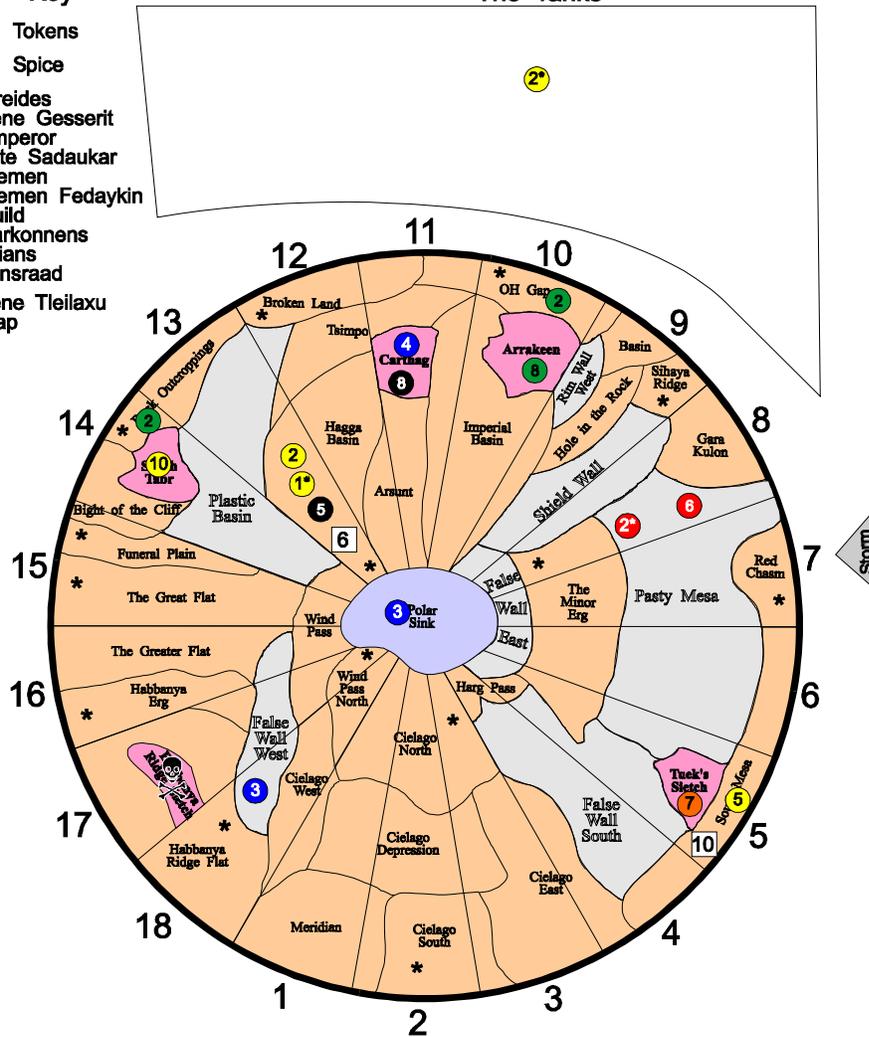
Shipping

Fremen ship 3 tokens (1 Fedaykin) to Hagga Basin (13)

Key

- Tokens
- Spice
- Atreides
- Bene Gesserit
- Emperor
- Elite Sadaukar
- Fremen
- Fremen Fedaykin
- Guild
- Harkonnens
- Ixians
- Lansraad
- Bene Tleilaxu
- ☠ Trap

The Tanks



Harkonnens ship 4 tokens to Hagga Basin (13) (8 spice to the Guild, Bene Gesserit accompanies to Polar Sink)

Movement

Atreides move 2 tokens Broken Land – Rock Outcroppings (14)
Bene Gesserit moves 3 tokens Wind Pass – False Wall West (18)
Fremen moves 5 tokens from False Wall South to South Mesa (5)
Harkonnens move 2 tokens Carthag to Hagga Basin (13)

Combat

Harkonnens vs. Fremen in Hagga Basin. Harkonnens are aggressors. Available leaders: all.

Press

Fremen – Atreides: You use a Karama to kill five of my tokens when I immediately get three back? I wasn't planning on using them against you, but now, if I ever get a chance, you had better watch out...Muad'dib my ass.

Positions

Atreides: 8 tokens Arrakeen, 2 tokens Rock Outcroppings (14), 2 tokens OH Gap (10), 8 tokens off-planet

Bene Gesserit: 4 tokens Carthag, 3 tokens False Wall West (18), 3 tokens Polar Sink, 10 tokens off-planet

Bene Tleilaxu: *Traps:* _____ in Habbanya Ridge Sietch

Emperor: 8 tokens (2 Elite Sadaukar) Pasty Mesa (9), 12 tokens (3 Elite Sadaukar) off-planet

Fremen: 10 tokens Sietch Tabr, 5 tokens South Mesa (5), 3 tokens (1 Fedaykin) Hagga Basin (13), 2 tokens (Fedaykin) in the tanks

Guild:

7 tokens Tuek's Sietch, 13 tokens off-planet

Harkonnens:

8 tokens Carthag, 5 tokens Hagga Basin (13), 7 tokens off-planet

Your Spice: _____

Your Intrigue cards: _____

Your traitor(s): _____

Dogface**Epoch III Hsuing-nu, Romans, and Sassanids****Epoch IV Empire Draw due: 4/1 Tuesday**

Common Cause plays Disaster in *Great Plain of China* (Monument eliminated, Capitol reduced to city). HSUING-NU. Army *Mongolia, Manchurian Plain, Eastern Steppe, Yellow River* (vs. Han Dynasty; plays Treachery; wins, city eliminated), *Wei River* (vs. Han Dynasty; Hs: 3, 2; Ha: 3; Hs: 4, 1; Ha: 4; Hs: 4, 2; Ha: 5; loses), *Wei River* (vs. Han Dynasty; Hs: 4, 3; Ha: 3; wins, city eliminated), *Great Plain of China* (vs. Han Dynasty; Hs: 6, 1; Ha: 4; wins, city eliminated, fleet Sea of Japan unsupported). Points: Dominance in Southern Europe (6), Presence in North Africa (2), Middle East (3), and China (3), 1 Capital (2), 1 city (1), and 2 Seas (2) for 19 points.

Arachnids ROMANS. Plays Elite Troops and Fanaticism. Army and Capital *Southern Apennines*, army *Northern Apennines, Dalmatia* (vs. Greeks; R: 6, 3, 2; G: 1; wins), *Pindus* (vs. Greeks; R: 5, 5, 4; G: 6, 4; loses, elite troops lost), *Pindus* (vs. Greeks; R: 6, 3; G: 4, 3; wins, fleets *Western Mediterranean* unsupported), fleet *Western Mediterranean, Eastern Mediterranean* (vs. Legacy Project; A: 5, 4; L: 1; wins), army *Levant* (vs. Persia; R: 6, 1; P: 4, 3; wins, city eliminated), *Palestine* (vs. Egypt; R: 4, 4; E: 5; loses), *Palestine* (vs. Egypt; R: 3, 1; E: 5; loses), *Palestine* (vs. Egypt; R: 4, 4; E: 1; wins), *Nile Delta* (vs. Egypt; R: 4, 2; E: 5; loses), *Nile Delta* (vs. Egypt; R: 4, 1; E: 3; wins, Capital reduced to city), *Danubia, Upper Tigris* (vs. Persia; R: 5, 4; C: 1, 1; wins, city eliminated), *Middle Tigris* (vs. Assyria; R: 4, 2; G: 4, 1; wins, city eliminated), *Lower Tigris* (vs. Babylonia; R: 5, 2; B: 3; wins, city eliminated), *Zagros* (vs. Persia; R: 5, 4; P: 4, 3; wins), *Persian Plateau* (vs. Mauryans; R: 4, 1; M: 6; loses), *Persian Plateau* (vs. Mauryans; R: 6, 4; M: 4; wins), *Hindu Kush* (vs. Mauryans; R: 6, 3; M: 6; wins), *Nubia* (vs. Civil War; R: 5, 3; C: 6; loses), *Nubia* (vs. Civil War; R: 5, 3; C: 1; wins), *Libya* (vs. Civil War; R: 6, 5; C: 1; wins), *Central Europe* (vs. Celts; R: 5, 3; C: 1, 1; wins). Builds Monuments *Southern Apennines* and *Nile Delta*. Points: Dominance in North Africa (4), Middle East (6), and Southern Europe (6), Presence in India (3) and Northern Europe (1), 1 Capital (2), 1 city (1), 7 Monuments (7), and 2 Seas (2) for 32 points.

The Legacy Project plays Disaster in *Southern Apennines* (Monument eliminated, Capital reduced to city). SASSANIDS. Army and Capital *Zagros* (Roman army retreats to *Middle Tigris*), army *Persian Plateau* (vs. Romans; S: 4, 3; R: 3; wins), *Hindu Kush* (vs. Romans; S: 6, 1; R: 2; wins), *Upper Indus* (vs. Mauryans; S: 6, 1; M: 3; wins), *Lower Indus* (vs. Vedic City States; S: 6, 4; V: 3; wins, city eliminated), *Ganges Valley* (vs. Mauryans; S: 4, 1; M: 1; wins), *Eastern Anatolia* (vs. Scythians; Sa: 6, 4; Sc: 4; wins), *Upper Tigris* (vs. Romans; S: 5, 2; R: 4; wins), *Zagros*. Builds Monument *Zagros*. Points: Dominance in Middle East (6) and India (6), Presence in Southern Europe (3), 1 Capital (2), 1 city (1), and 6 Monuments (6) for 24 points.

Players

| Player Name | Player Faction Name | Empire Strength Points | Victory Points |
|--------------|--|------------------------|----------------|
| Cary Nichols | Common Cause (black) | 20 | 47 |
| Kevin Wilson | Royal Manticoran Historical Society (purple) | 20 | 45 |
| Andy Lewis | Dogs and Deities (DAD) (orange) | 21 | 43 |
| Chris Geggus | APA (green) | 22 | 46 |
| Dennis Cain | The Legacy Project (red) | 28 | 55 |
| Paul Bolduc | Arachnids (blue) | 36 | 51 |

Final Positions

Royal Manticoran Historical Society. INDUS VALLEY: Armies *Western Deccan, Western Ghats, and Ceylon*. ASSYRIA: Army *Western Anatolia*. IBERIAN KINGDOM: Army, city, and fort *Southern Iberia*. CELTS: Three armies and Monument *Albion*, two armies *Scandinavia*, armies *Baltic Seaboard, and Northern Gaul*.

The Legacy Project. BABYLONIA: Army *Persian Salt Desert*. PERSIA: Army and city *Morea*. SASSANIDS: Two armies, Capital, and Monument *Zagros*, army and Monument *Eastern Anatolia, Upper Tigris, Persian Plateau, Upper Indus, and Lower Indus*, armies *Hindu Kush* and *Ganges Valley*.

Dogs and Dieties. Fleet *Bay of Bengal*. ARYANS: Army *Turanian Plain*. MAURYANS: Army, Capital, and Monument *Ganges Delta*, armies *Eastern Deccan, Eastern Ghats, and Malayan Peninsula*.

APA. Fleet *South China Sea*. MINOANS: Army *Shatts Plateau*. NILE KINGDOM: Army, city, fort *Upper Nile*. CHOU DYNASTY: Two armies *Irrawaddy*, army *Si-Kyang*. MAYANS: Army and Capital *Central America*, army *Guiana Highlands*. HAN DYNASTY: Army and Monument *Tarim Basin*, armies *Chekiang, Yangtse Kian, Szechuan, Mekong, and East Indies*.

Common Cause. Fleets *Black Sea* (2), and *Red Sea*. EGYPT: Army *Arabian Peninsula*. GREEK CITY STATES: Army and city *Crete*, army *Balkans*. HSUING-NU: Armies *Mongolia, Eastern Steppe, Manchurian Plain, Yellow River, Wei River, and Great Plain of China*.

Arachnids. Fleets *Western Mediterranean* and *Eastern Mediterranean*. SCYTHEANS: Army *Caucuses*. ROMANS: Army and city *Southern Apennines*, army, city, and Monument *Nile Delta*, army and Monument *Levant* and *Middle Tigris*, armies *Northern Apennines*, *Dalmatia*, *Danubia*, *Central Europe*, *Pindus*, *Libya*, *Palestine*, and *Lower Tigris*.

Event Cards

Epoch IV Empire Draw

Your Event Cards are: _____

Wolfbane

Turn 8

Turn 9 due: 4/1 Tuesday

Commander Actions

Minas Ithil passes

Discovery Project buys a titanium factory (Or3, Or3, Wa5, Or5, Wa6, Wa8) and a population factor (Wa10)

Planets 'R Us buys 2 water factories (Or1, Or2, Or3, Or4, MWa) and moves population factors from ore factories to man them.

2114 Corporation opens the bidding on an Orbital Lab at 50 and gets it (Or2, Or4, Or5, Wa6, Wa8, Wa8, Wa8, Wa9)

OCEAN buys a titanium factory (MWa) and a population factor (Ti10)

Bartertown buys a titanium factory (Or2, Wa8, Wa9, Ti11) and moves a population factor from an ore factory to man it.

HBDC IX passes

Dogs in Space buys a titanium factory (Or3, Or4, Wa7, Wa7, Wa9) and moves a population factor from an ore factory to man it.

The Players

| | Outpost Name | Commander | Factories | Upgrades | VP |
|---|---------------------|------------------|--|-----------------|-----------|
| 1 | 2114 Corporation | Dennis Cain | OrF, OrF, WaF, WaF, WaF, WaF | No, DL, OL | 12 |
| 2 | Discovery Project | Cary Nichols | OrF, OrF, WaF, WaF, WaF, TiF | 2Wa, No, HE | 12 |
| 3 | OCEAN | Michael Lowrey | OrF, OrF, WaF, WaF, WaF, WaF, TiF, TiF | No, HE | 11 |
| 4 | Planets 'R Us | Dave Partridge | OrF, OrF, WaF, WaF, WaF, WaF, WaF, WaF, WaF | No, DL | 10 |
| 5 | Minas Ithil | Bill Scharf | OrF, OrF, WaF, WaF, WaF, TiF, TiF | HE, 2Wa | 10 |
| 6 | Bartertown | Andy York | OrF, OrF, WaF, WaF, TiF, TiF | HE, No | 9 |
| 7 | Dogs in Space | Andy Lewis | OrF, OrF, WaF, WaF, WaF, TiF | DL, HE | 8 |
| 8 | HBDC IX | Kevin Wilson | OrF, OrF, WaF, WaF, WaF | 2DL, Wa | 8 |

Available Upgrades

Income

New Arrivals: Ecoplants

| Upgrade | Minimum Bid | Available | Not Yet Delivered |
|------------------|--------------------|------------------|--------------------------|
| Scientists (Sc) | 40 | 0 | 5 |
| Orbital Lab (OL) | 50 | 0 | 4 |
| Robots (Ro) | 50 | 3 | 2 |
| Laboratory (La) | 80 | 3 | 2 |
| Ecoplants (Ec) | 30 | 1 | 4 |
| Outpost (Ou) | 100 | 1 | 4 |

OCEAN and Planets 'R Us take MegaWater cards.

Guard Dog

Influence Allocation and Turn 1 Funeral Commission through Parade Phase

Turn 2 Cure Phase through Health Phase due: 4/1 Tuesday

Funeral Commission

MLI plays New Official History (61), causing LVC to lose 6 IP from all politicians declared (Tigran Zenjarplan). LVC plays Setbacks in Afghanistan (25). Ulan Putschnik is broken to the ranks of the people (influence intact). Acting Foreign Minister Tigran Zenjarplan nominates Anatol Mischif (I) as the new Party Chief. The nomination passes with 2 yes votes and 2 abstentions.

Defense Minister by age. Lech Schukrotoff (B) advances to Economy and Petr Niewitko (D) to Sport by age. F and G advance to Candidates by age.

Rehabilitation

None.

Parade

Anatol Mischif waves (ages to 73).

Politburo

| Office | Politician | Condition | Influence |
|---------------|-----------------------|------------------|------------------|
| Party Chief | Anatol Mischif (I) | 73, + | 1 (MLI) |
| KGB Head | Tigran Zenjarplan (Q) | 63, ?, +, weak | 5 (MLI) |
| Foreign | Alexei Goferbok (C) | 74 | |

Replacement

MLI declares 1 IP on I. Anatol promotes Mikail Strychnin (T) to Ideology, Alexej Goferbok (C) to Sport, and Z and M to candidates. Anatol ages to 72. Alexei Goferbok advances to Foreign Minister and Antonj Talksalot to

| Office | Politician | Condition | Influence |
|----------|----------------------|------------|-----------|
| Defense | Antonj Talksalot (J) | 68, + | |
| Ideology | Mikail Strychnin (T) | 57, strong | |
| Industry | Iwan Manjak (P) | 62, weak | |
| Economy | Lech Schukrotoff (B) | 75, strong | |
| Sport | Petr Niewitko (D) | 73 | |

Pasquale Giovine Marxist-Leninists Integralists
 Mike Scot The California Connection
 Ward Narhi Underground Neo-Communist Liberation Effort
 Bob Robles Hard Line Stalinists
 Chris Geggus Lubianka Visitors Club
 MLI have one wave.

Intrigue Cards

Politicians listed in **bold** are in the sanatorium. Influence in **bold** indicates controlling faction.

Candidates: F, G, M, O, Z
People: H, K, L, N, S, U, V, W, X, Y (54, 10 IP [UNCLE])
Siberia: E (73), R
Kremlin Wall: A

Undeclared Influence

Players

Andy Lewis Trotskyite Internationalists

Dogged

Turn 1, Phases IV-VI and Turn 2, Phases I-III
Turn 2 Phases IV-VI and Turn 3 Phases I-III due: 4/1 Tuesday
Turn 1

Construction and Operation

Red (Scharf) operates claim #85 (\$30, 3 coal).
Green (Nichols) operates claim #32 (\$50, 2 gold), buys a 15 power train (\$120), and hires an additional Surveyor (\$400)
Orange (Narhi) operates claim #98 (\$60, 4 gold), and hires an additional Surveyor (\$400)
Blue (Bolduc) operates claim #37 (\$40, 4 silver).
Purple (Carl) operates claim #89 (\$30, 3 coal), buys a 15 power train (\$120), and hires an additional Surveyor (\$400)

Determine Price Changes

Gold: No change Copper: +2 to \$240 Silver: +2 to \$240

| | Denver | Salt Lake City | Pueblo | Santa Fe | El Paso |
|---------|------------|----------------|------------|------------|-----------|
| Lumber: | -1 to \$80 | -1 to \$100 | -1 to \$80 | -1 to \$60 | No change |
| Coal: | -1 to \$60 | -1 to \$40 | No change | +1 to \$60 | No change |

Turn 2

Move Prospectors and Surveyors

Red (Scharf) Surveys Colorado Springs to Pueblo, Prospects Denver to Colorado Springs passenger line.
Green (Nichols) Surveys Colorado Springs to Divide and Colorado Springs to Pueblo, and Prospects #38.
Orange (Narhi) Surveys El Paso to Rincon and Deming to Whitewater, and Prospects El Paso to Deming passenger line.
Blue (Bolduc) Surveys Provo to Eureka, Prospects Salt Lake City to Provo passenger line.
Purple (Carl) Surveys Pueblo to Manitou Junction, Pueblo to Canon City, and Prospects #43

Dispute Resolution

No disputes. Red pays \$205, Green pays \$500, Orange pays \$375, Blue pays \$190, and Purple pays \$400.

The Players

| Player | Color | Starting Location | Money | Trains | Snowplows | Personnell |
|--------------|--------|-------------------|--------|--------|-----------|------------|
| Bill Scharf | Red | Denver | \$1505 | 9 | | P, S+1 |
| Cary Nichols | Green | Denver | \$670 | 9, 15 | | P+1, S, S |
| Ward Narhi | Orange | El Paso | \$1165 | 9 | | P+1, S, S |
| Paul Bolduc | Blue | Salt Lake City | \$1610 | 9 | | P+1, S |
| Joe Carl | Purple | Pueblo | \$850 | 9, 15 | | P+1, S, S |

Purchased Claims

| # | City | Owner | Type | Goods | Operation |
|----|-------------|--------|--------|-------|-----------|
| 85 | Canon City | Red | Coal | 3 | \$30 |
| 32 | Fairplay | Green | Gold | 2 | \$50 |
| 38 | Aspen | Green | Silver | N | \$40 |
| 98 | Pinos Altos | Orange | Gold | 4 | \$60 |
| 37 | Eureka | Blue | Silver | 4 | \$40 |
| 89 | Walsenburg | Purple | Coal | 3 | \$30 |
| 43 | Leadville | Purple | Silver | N | \$50 |

Purchased Passenger Lines

| # | Type | Route | Payoff | Owner | Notes |
|---|------|---------------------------|--------|--------|-------|
| 3 | A | Denver – Colorado Springs | \$50 | Red | |
| 4 | A | El Paso – Deming | \$60 | Orange | |
| 2 | A | Salt Lake City – Provo | \$20 | Blue | |

Available Claims

| # | City | Type | Claim | Operation |
|-----|-------------|--------|-------|-----------|
| 80 | Aspen | Coal | \$60 | \$30 |
| 114 | McGaffey | Lumber | \$40 | \$30 |
| 109 | Pinos Altos | Copper | \$80 | \$20 |

| # | City | Type | Claim | Operation |
|-----|-------------|--------|-------|-----------|
| 48 | Ouray | Silver | \$60 | \$40 |
| 107 | Santa Rita | Copper | \$100 | \$50 |
| 65 | El Vado | Lumber | \$100 | \$30 |
| 116 | Pinos Altos | Lumber | \$60 | \$30 |
| 129 | Dillon | Copper | \$100 | \$40 |

Available Passenger Lines

| # | Type | Route | Payoff | Cost | Notes |
|----|------|-----------------------------|--------|-------|--|
| 5 | A | Denver – Pueblo | \$80 | \$165 | |
| 10 | B | Denver – Aspen | \$130 | \$250 | |
| 8 | A | Denver – Leadville | \$260 | \$500 | Discard after 4 Leadville depletions |
| 16 | B | Salt Lake City – Grand Jct. | \$250 | \$465 | Discard when 22 is taken. Good for \$250 toward card 22 |
| 7 | A | Pueblo – Santa Fe | \$120 | \$280 | |
| 1 | A | Denver – Boulder | \$20 | \$45 | |
| 6 | A | Santa Fe – Albuquerque | \$90 | \$180 | |

| # | Type | Route | Payoff | Cost | Notes |
|----|------|-----------------------------|--------|-------|--|
| 11 | B | Salt Lake City – Grand Jct. | \$140 | \$310 | Discard when 20 is taken. Good for \$140 toward card 20 or 21 |

Available Trains

| Type | # Available | Cost |
|------|-------------|-------|
| 9 | 1 | \$80 |
| 15 | 4 | \$120 |

Available Snowplows

| Type | # Available | Cost |
|--------|-------------|------|
| Die +2 | 3 | \$40 |

Notes

Just a reminder that even if you have two Surveyors, you cannot chain together your Surveyors to survey two consecutive lengths of track starting from a place you own in the same turn – that is only allowed in games with four or fewer players. In other words, if you were starting in Santa Fe, you could not survey Santa Fe to Lamy, and Lamy to Albuquerque in the same turn. You could, however, survey Santa Fe to Lamy and Santa Fe to Taos in the same turn.

Trivia Quiz

You get 2 points for a solo answer, 1 point for sharing the correct answer with one other person, and ½ point for sharing the answer with two or more people. Every 10 points earn you a free issue. Research is allowed. Free issues are credited as they are earned. Players may submit a list of questions (answers must be included.) If used, five points are awarded. In addition, if no correct answers are received for a question, the supplier of the question receives two points.

And so, without further ado, the answers to last issue's questions:

Q1. What is the largest volcano in our solar system?

A1 Olympus Mons on Mars, at 24km high and 500km wide.

Andy York, Scott Hutchens, Bob Robles, and Joe Carl each receive ½ point.

Q2. OSS, the first U.S. espionage agency, was succeeded in what year by the CIA?

A2. 1947.

Andy York, Scott Hutchens, Chris Geggus, Bob Robles, and Joe Carl each receive ½ point.

Q3. In what year was H. M. Stanley's search for Dr. Livingstone successful?

A3. 1871.

Andy York, Scott Hutchens, Chris Geggus, Bob Robles, and Joe Carl each receive ½ point.

Q4. Livingstone died in an African village. Where is he buried?

A4. Westminster Abbey

Andy York, Scot Hutchens, Brendan Whyte, Chris Geggus, Bob Robles, and Joe Carl each receive ½ point.

Q5. What is the process of nuclear division in a cell by which the chromosome count is reduced to half its original number?

A5. Meiosis. The process of nuclear division in which a cell's chromosome count remains unchanged is mitosis.

Andy York, Scott Hutchens, Bob Robles, and Joe Carl each receive ½ point.

Current Scores

| | | | | | |
|--------------|-----|---------------|-----|----------------|-----|
| Chris Geggus | 89 | Andy York | 85 | Joe Carl | 70 |
| Paul Bolduc | 67½ | Caleb Cousins | 67½ | Bill Scharf | 65 |
| Dennis Cain | 58 | Brendan Whyte | 52½ | Andy Lewis | 45½ |
| Bob Robles | 37½ | Ward Narhi | 33½ | Steve Koehler | 31½ |
| Tom Howell | 28½ | Kevin Wilson | 23½ | Brad Martin | 16 |
| Cary Nichols | 15 | Sean Cousins | 7 | Scott Hutchens | 6½ |

Joe Carl is awarded a free issue.

New Questions

Topic: Miscellaneous Trivia

1. When was the first Nobel prize awarded?
2. How long does it take the Earth to rotate once?
3. Who suggested the concept of Daylight Saving Time (DST)?
4. Which metallic element has the highest boiling point?
5. What percentage of the Moon's surface is visible from the Earth.

Pedagogy

The collision of two stars with each other would be an awesome sight – if you could see it from far enough away to avoid being killed. However, since stars are so small in comparison to the size of the galaxy, the chances of it happening were believed to be impossibly remote. It is now believed, that there are places where the chances of a stellar collision are very much higher than we see in the galactic disc. The prime candidates for stellar collisions are globular clusters.

Globular clusters are very large, roughly spherical clusters of 100,000 or so stars that orbit our galactic center, generally outside the disc. They are very old – probably some of the first stellar systems that formed. As such, there are certain evolutionary processes that have had a long time to operate. For our purposes here, the most important is something called evaporation. Stars in globular clusters are crowded close together; less than a light year apart on average, and

even closer in the center of the cluster. Because of this, close encounters are fairly common. One of the consequences of this is that sometimes, close encounters, particularly those involving three or more stars, will throw one of the stars completely out of the cluster. This star carries energy away with it, resulting in a cluster that is more tightly bound; the stars are closer to each other on average, and are moving more slowly relative to each other. Since the stars are moving more slowly, a close encounter has a much greater change of becoming a collision, because gravity has more time to act and to deflect the paths of the stars toward each other. A third mechanism that enhances the chances of collision is something called tidal capture. In this case, a regular star passes close to a compact object like a black hole or neutron star. The tides caused by the compact object dissipate energy, causing the star to be captured into an orbit rather than

just swinging away. Eventually, tidal dissipation and gravitational radiation will cause the two stars to spiral into each other.

What happens when two stars collide? Like when two vehicles collide, it depends on a number of factors: the size and mass of the two colliders, the speed at which they collide, and the “impact parameter”, a measure of whether the collision is head-on or glancing. Generally, the denser object is affected least in the collision. For this purpose, we can separate stellar objects into seven different classes, listed here from most compact to least:

- Black holes. Black holes have at least three to four times the mass of our sun, but a Schwarzschild radius of only about 10 km. Density is a meaningless concept for a black hole, because the Schwarzschild radius represents the surface at which the escape velocity becomes equal to that of light, and is not a physical surface.
- Neutron stars. Neutron stars have a mass of from 1.4 to about 3 times solar mass, and a typical radius of about 10 to 15 km. Density is about 10^{12} gm/cm³, or about the density of an atomic nucleus. (Water has a density of 1 gm/cm³)
- White dwarves. Typical mass is 0.7 solar masses, typical radius is about that of the Earth. Density is about 10^6 gm/cm³.
- Brown dwarves. These are failed stars, usually with a mass less than 8% the mass of the sun, and a radius comparable to Jupiter’s. Density is about 100 gm/cm³.
- Main sequence stars. Our sun is a good example. They have masses ranging anywhere from about 10% solar mass up to almost 100 times solar mass, with radii similarly varying over a wide range. Taking our sun as a typical example, it has an average density of about 1.4 times that of water.
- Red giants. These are stars like our sun that have swelled so large that they would reach Earth’s orbit. Average density is 10^{-7} gm/cm³, or about as dense as a high-grade industrial vacuum on Earth.
- Supergiants. These are massive stars that have swelled so large that they would reach beyond Jupiter’s orbit. Average density is about 10^{-9} gm/cm³, or about the density of Earth’s atmosphere at about 250km above the surface.

One final thing to note is that even though red giants and supergiants are incredibly diffuse, they have small, dense cores that are comparable in size and density to small white dwarves.

Let’s take a look at the various collision scenarios. Let’s first take a look at a black hole hitting various other stars. The cases of a black hole hitting a supergiant or red giant are very similar. In each case, the collision takes a long time, about a month for a red giant, and several months for a supergiant. As the black hole approaches, tidal forces on the giant star cause it to distort. Some matter will be drawn to the black hole, forming an accretion disk. As the black hole enters the giant star, more matter will be drawn into the disk, while shock waves will heat the matter of the star and tidal forces will throw matter on the far side of the core away. Eventually, the black hole will emerge, totally unscathed, but with an accretion disk containing a moderate fraction of the giant star’s envelope. Most of the rest of the envelope will be cast off, due to shock heating and tidal effects, leaving just the core, which will cool down into a white dwarf.

In the case of a black hole hitting a main sequence star or brown dwarf, the scenario is similar, except that it takes much less time – hours instead of months. The shock heating will be much more drastic, raising the temperatures high enough to cause hydrogen fusion to occur. This will result in a tremendous release of energy. In the case of a star like the sun, it would release as much energy in about an hour as it normally would in 100 million years. This tremendous release of energy will totally disrupt the star, leaving just a black hole with an accretion disk.

If a black hole were to hit a white dwarf, the tidal effects would rip the white dwarf apart before the black hole actually hit the white dwarf’s surface.

Fusion would probably not occur, because there is very little hydrogen left in a white dwarf. While higher order fusion could theoretically occur, it is unlikely that temperatures and densities could get high enough to allow it. Most of the mass of the white dwarf would be drawn into an accretion disk around the black hole, while some would be cast away.

The situation is similar if a black hole were to hit a neutron star. The neutron star would be torn apart. In this case, it is almost guaranteed that fusion would not occur, since the core of a neutron star is mostly neutrons. Once again, you would be left with a black hole with an accretion disk.

If two black holes were to collide, the result would be a merger. Nearly all of the energy would be released as gravitational waves, so the merger would not be detectable in conventional telescopes.

Neutron stars hitting other stars have similar effects. For supergiants or red giants, the giant star has its envelope stripped, leaving a white dwarf. Main sequence stars, brown dwarves, and white dwarves, are completely disrupted. In each of these cases, what happens to the neutron star depends on whether it gains enough mass to cause it to collapse into a black hole. In any event, the neutron star will gain an accretion disk. If two neutron stars were to collide, it is likely that they would collapse into a black hole, but it is possible that if the neutron stars were at the lower limit of their mass, the result would be a very massive neutron star.

When a white dwarf hits another star, the results are once again similar. Supergiants and red giants will have their envelopes stripped away, leaving a white dwarf. The original white dwarf may gain a small accretion disk, but will otherwise be largely unaffected. If a white dwarf were to hit a main sequence star, it would totally disrupt it, while once again remaining largely unaffected. If a white dwarf were to hit a brown dwarf, it is likely that more of the mass of the brown dwarf will be accreted onto the white dwarf, which may cause the white dwarf to collapse into a neutron star. In any event, the brown dwarf would be eliminated. If two white dwarves were to collide, it is likely the result would be massive enough to collapse into a neutron star, but it is possible that the result would just be a very massive white dwarf.

If a brown dwarf hits a supergiant or red giant, once again, the giant star’s envelope would be stripped away, leaving behind a white dwarf. The brown dwarf would probably get a little hotter and may gain a little mass, but would largely be unaffected. If a brown dwarf star were to hit a main sequence star, the result would likely be a merger, resulting in a main sequence star that is slightly more massive than before. However, the mixing that results from the merger would add additional hydrogen to the core, giving it a larger fuel supply than it otherwise would have. If two brown dwarves collide, the result would either be a larger brown dwarf, or a small main sequence star, depending on the mass of the original brown dwarves. If the combined mass is greater than 8% of solar, the result will be massive enough to trigger hydrogen fusion in its core.

If a main sequence star were to hit a supergiant or red giant, once again, the envelope of the giant star would be stripped away, leaving behind a white dwarf. The main sequence star would get hotter, and may gain a little mass, but would be largely unaffected in the short term. In the longer term, the additional heat and mass gained will probably shorten the star’s life by a short amount. If two main sequence stars were to collide, they would merge. A small fraction of the combined mass would be thrown clear and lost, but most of the mass would end up in the new star, which would be hotter and brighter than either of the original stars.

Finally, if a red giant or supergiant star were to hit another red giant or supergiant, the most likely result would be that both stars would lose their envelopes. Such collisions would take a long time, years in a supergiant versus supergiant collision, but the end result would be two white dwarves.

One final consideration; how would planets fare in such circumstances? The short answer is very poorly. Planets would either be absorbed by one or the

other star, or thrown out of the system entirely. In either case, it is not a picture of which you would want a close-up view.

Next time, I will discuss measuring the speed of gravity.

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Standbys

Anybody who gets onto my standby list automatically receives one free issue of *S.O.B.* In addition, if you actually submit standby orders, you get another free issue. So, let's get those people standing by. The current standby list is:

Machiavelli (gunboat and regular): Steve Koehler, Bill Scharf, Bob Robles, Mike Scott, Ward Narhi, Paul Bolduc, Joe Carl, Pasquale Giovine, Andy York, Cary Nichols
Dune: Steve Koehler, Paul Bolduc, Kevin Wilson, Ward Narhi, Andy York, Cary Nichols, Bill Scharf
New World: Andy York, Bill Scharf, Cary Nichols
Merchant of Venus: Paul Bolduc, Carrie Lewis, Bob Robles, Andy York, Cary Nichols
Outpost: Michael Lowrey, Kevin Wilson, Andy York, Cary Nichols, Bill Scharf
History of the World: Andy Lewis, Paul Bolduc, Kevin Wilson, Chris Geggus, Andy York, Phil Reynolds, Cary Nichols
Stellar Conquest: Paul Bolduc, Kevin Wilson, Andy York, Cary Nichols
Liftoff!: Dennis Cain, Andy York, Cary Nichols, Bill Scharf
Age of Renaissance: Bob Robles, Michael Lowrey, Cary Nichols
Kremlin: Joe Carl, Andy York, Andy Lewis, Pasquale Giovine, Cary Nichols, Bill Scharf
Silverton: Cary Nichols, Bill Scharf
Settlers of Catan: Michael Lowrey, Chris Geggus, Cary Nichols

Standby Calls

None this issue.