Cyber Warfare Matrix Game

Introduction

This is a game of Cyber Warfare that is being waged right now on the internet in our streets and cities, in our institutions, our workplaces and in our own homes. It is the war between big business, international spies and globally capable criminal hacking collectives.

Conduct of the Game

The game is intended to be played with 6 players in 8 to 12 turns of play.

What are Matrix Games?

Matrix games are different to normal games. In most of those games you compare lists of statistics and peer at complicated books of rules containing someone else's idea about what things are important, before rolling a dice. It takes a long time and can be very difficult to explain to a newcomer.

Instead, in a Matrix Game you simply use words to describe why something should happen, the Umpire decides how likely it is, and you roll a dice. If you can say "This happens, for the following reasons..." you can play a Matrix Game.

Game arguments

In a Matrix Game, actions are resolved by a structured sequence of logical "arguments". Each player takes turns to make an argument, with successful arguments advancing the game and the player's position. The arguments themselves are judged by the Umpire based on inherent likelihood, historical precedence, personal experience, and his own judgement (and quite often the other player's judgement), and a chance of success arrived at (percentage dice normally being thrown to see if the result was achieved – or the Umpire could decide based on his judgement and the justice of the circumstances).

Each argument is broken down into:

- Something That Happens.
- Reasons Why or How (Pros).
- Reasons Why Not (Cons) (from other participants).

For Example:

The Mockheed Larkin Player might argue:

The British Government announces that it is committed to increase its purchase of F-45s from 40 to 80 because:

- The withdrawal of UK forces from Afghanistan will massively reduce the cost of "Urgent Operational Requirements" permitting more money to be spent on longer term Defence programmes,

- The success of the intervention in Libya has raised the profile of air power once again, but demonstrated that shore based aircraft like the Typhoon are insufficient to provide the tactical flexibility necessary for modern intervention operations,

- They need something to deter the British public from the embarrassment of paying for two aircraft carriers with no aircraft capable of flying from them.

I wouldn't personally rate this as a very good argument – the number of aircraft is doubling the overall program which is unlikely and most of the money freed up from the withdrawal from Afghanistan is likely to be used up in funding the debt crisis. The political argument of distracting the focus from the carriers not having any aircraft is,

however, something politicians are perfectly capable of doing, so I might be inclined to support that. I would rate this argument as only having a 20-30% chance of success – but if it was reduced to, say, 10 additional aircraft I would rate the argument as much more likely – say 60-70%. The important point is to act as a facilitator and achieve a consensus from the participants as to the probability of success and drive the narrative onwards.

Player Secret Personal Briefings

USA:

1. Export Western Ideals and products to the world, whether they want them or not.
2. Prevent the export of advanced American technology to anyone who might be the least bit unfriendly.
3. Defend freedom, democracy and the American Way of Life from foreigners.

China:

1. Advance Program 863 which is designed to render China independent of financial obligations for complex foreign technologies.
2. Suppress misguided opposition encouraged by foreign powers bent on preventing China taking its rightful place in the world.
3. Defend the measured and enlightened march of progress that is the Chinese way of life.

Mockheed Larkin:

1. Sell Technologically Advanced Weapons (but only to approved customers).
2. Increase your Market Share, preferably at the expense of BEA.
3. Protect your Intellectual Property.

BEA Systems:

1. Sell Technologically Advanced Weapons to anyone by any means.
2. Increase your Market Share, preferably at the expense of Mockheed Larkin.
3. Protect your Intellectual Property.

Anonymous (Hacking Collective):

1. Do something idealistic.
2. Do something just for fun.
3. Do something that is contradictory to something you have done earlier in the game.

Russian Business Network (Criminal Hacking, Money Laundering and Bulletproof Hosting Organisation):

1. Generate income by any means.
2. Do something patriotic for Mother Russia.
3. Hire your services to another player.

Kinematic Corporation:

1. Be the preferred supplier of advanced technology hardware and software to large equipment manufacturers.
2. Protect your intellectual property at all costs.
3. Exploit your position of being outside the USA (and not subject to ITAR restrictions).

The Syrian Electronic Army:

1. Attack Western capitalist companies and draw attention to your cause.
2. Support President Bashar Assad.
3. Demonstrate your sophistication by using humour to humiliate your opponents, at least once.

Matrix Game - All Your Secrets Are Belong To Us - Background

Joint Attack Fighter (JAF) is a 5th generation advanced program intended to replace a wide range of existing fighter, strike, and ground attack aircraft for the United States, the United Kingdom, Canada, and their allies. The proposed system is more than just a new, advanced, stealth-capable aircraft but is intended to be an entire integrated "capability" including the platform, weapons, detection and engagement capability, logistic supportability as well as a fully integrated command and control system.

The prime contractor in this programme is Mockheed Larkin with their **F-45 Thunderbolt II** aircraft, with models capable of Vertical Take Off and Landing (VTOL) and Short Take Off and Vertical Landing (STOVL), stealth capability, high performance and an integrated situational & threat awareness package. The programme is supported by consortium of other companies, including BEA Systems who have designed the revolutionary pilot helmet with its voice activated controls, head-up display and its ability to "see through" the aircraft via the 360^0 cameras and sensors, allowing the pilot to spot threats and prosecute targets in any direction.

There are of course predictable concerns about project delays and cost overruns, but what large scale Defence Project hasn't had its share of those? It is true that the final cost of the most advance model of the F-45 could be as much as $200M each and require a staff of 35 personnel to keep it operational, as well as taking more than twice as long to train the pilots as for a conventional F-16 – but it stands to be the most capable and advance air warfare system on the planet, so some sacrifices will be necessary.

There is also the embarrassing study carried out by the Rand Corporation in their "Pacific View Air Combat Briefing" that showed that a larger number of inferior more conventional jet fighters could defeat a smaller number of technologically advanced F-45s by surviving to bypass them and destroy their refuelling tankers.

BEA Systems have decided to pursue an alternative approach, matched to their desire to sell equipment to Second and Third World regimes. This is to back the development of a simple, low cost, high endurance, highly supportable advance turboprop airframe, the **J-9 Avalanche**, capable of mounting a large variety of different systems. These range from the simplest "dumb" bombs, through terminally guided warheads, advanced long range missile systems up to the advanced Low Cost Integrated – Air Superiority System (LCI-AS^2).

The LCI-AS^2 system allows technically sophisticated high-bandwith sensor and communications pods to be carried to augment the basic airframe systems, linked to a centralised command and control "Air Superiority Centre". This will

allow the huge processing power of ground based analysis systems to enable advanced airborne detection in the Thermal and VHF bands (reducing the effectiveness of stealth technologies which are optimised for X-Band arrays), full spectrum situational and threat awareness as well as integrated command and control for large numbers of inexpensive airframes – including the possibility of remotely piloted versions of the standard airframe.

The J-9 airframe is intended have a range of up to 3,000 Nm, with an endurance of 6-8 hours. It will have a crew of two, to reduce crew fatigue and training costs, with each airframe to cost no more than $9M and require a ground staff of only 4 personnel to support the system. The concept, while BEA is the "prime contractor", is made up of a large consortium of different contractors providing the huge range and variety of weapon, sensor, counter-measures, fuel tanks and other pods capable of integrating with the J-9 airframe. This includes a number of advanced long range (Beyond Visual Range (BVR)) missile systems manufactured by Mockheed Larkin. The basic models will be ideal for Countries requiring a simple, robust airframe for internal security and counter insurgency, as well as allowing a comprehensive upgrade path to more advanced capabilities as and when required.

Kinematic Corporation is a UK based multi-national defence technology organisation specialising in software and prototype hardware research. It was controversially created as a private company at the height of the mergers and acquisition frenzy that took place shortly before the banking crisis, from part of a British Government research organisation - and is occasionally accused of ruthlessly exploiting its status and inside knowledge to gain a competitive advantage in UK procurement. It aims to position itself to be the preferred partner to a number of large defence hardware manufacturers.

It also actively seeks to exploit its position of being a an extremely high technology defence contractor outside the USA and thereby able to avoid the problems associated with the US Government application of International Traffic in Arms Regulations (ITAR) – the US government having re-defined the classification of "Arms" to include sophisticated technology, cryptography and any material pertaining to defence and military technology, not just weapons and ammunition.

Kinematic seeks to provide the software systems and design prototypes for the **Predator DAS** (Distributed Aperture System) pilot helmet intended to be used in the F-45 Thunderbolt as well as the **Common System Framework** (CSF) software, head up display (HUD) and communications interoperability architecture for the LCI-AS^2 system. It also has a large number of patents and sophisticated concept-demonstrator prototypes in emerging technologies.