The question is to analyze the parties’ legal positions. Organize your response as follows, clearly labeling the subparts:

Subpart A: Discuss any issues concerning copyright and, if applicable, moral rights.

Subpart B: Discuss any issues concerning patents and trade secrets, and, if applicable, any sui generis rights or other forms of IP protection for inventions, industrial designs, or the like.

Subpart C: Discuss any issues concerning trademark (including trade dress, unfair competition, and related doctrines).

Subpart D: If there is anything else you wish to discuss, which does not belong in any of subparts A through C, please put it under this Subpart D.

A few things to keep in mind: The subparts will not all be given equal weight. The subpart structure is provided for organizational purposes only. Thus, it may be entirely appropriate for one subpart to be answered with considerable brevity, while other subparts might require very detailed analysis. Pace yourself appropriately, and plan ahead to put information where it belongs.

Some suggested abbreviations for your answer:

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>111</td>
<td>Claim 1 of U.S. Patent No. 6,101,111</td>
</tr>
<tr>
<td>222</td>
<td>Claim 2 of U.S. Patent No. 7,209,222</td>
</tr>
<tr>
<td>55</td>
<td>Sapindale design no. 555-55</td>
</tr>
<tr>
<td>66</td>
<td>Good Cheer design no. 6026-66 ACD audio chip designs</td>
</tr>
<tr>
<td>CC</td>
<td>Carrie Carlyle</td>
</tr>
<tr>
<td>DD</td>
<td>Dieter Danvar</td>
</tr>
<tr>
<td>DNS</td>
<td>distribution negotiation spreadsheets</td>
</tr>
<tr>
<td>GG</td>
<td>Good Cheer Greeting Card Co.</td>
</tr>
<tr>
<td>HH</td>
<td>hypochromic hyperpolymer (hylonex) LL</td>
</tr>
<tr>
<td>LL</td>
<td>Lawndale Laboratories</td>
</tr>
<tr>
<td>MM</td>
<td>Montvale, Massachusetts</td>
</tr>
<tr>
<td>SS</td>
<td>Sapindale Sentiments</td>
</tr>
<tr>
<td>TT</td>
<td>Tyork Tyorksson</td>
</tr>
<tr>
<td>VV</td>
<td>Vic Vasarelski</td>
</tr>
<tr>
<td>XX</td>
<td>Hexetron Xenotech</td>
</tr>
</tbody>
</table>
SUBPART A – COPYRIGHT

The discs:

There are close copyright issues to analyze with regard to the data DVD. First, could the data DVD be copyrightable as a whole? Probably yes, because even though most of the information on the disc is likely not copyrightable, a compilation of non-copyrightable information can itself be a copyrightable work of authorship. But this would mean only that the compilation itself – the ordering and grouping – cannot be copied; copying the constituent data is not, by itself, infringing. The facts say VV "copied everything to a flash drive," which may or may not mean he copied the compilation, as such. However if he did, and perhaps if he redistributed it as such, there's a plausible infringement action on that basis.

Now let's move to the categories of files on the DVD:

The ACDs may be copyrightable if they are more than industry-standard blueprints. The graphics could reflect expressive choices as to color and style of the graphics, angles from which they are drawn, etc. But if these graphics files are better characterized as engineering output, then they would lack the requisite degree of creativity required for copyright. Facts, ideas, systems, etc., aren't copyrightable, and a straight-forward graphical means of conveying them would likely be held to merge into an uncopyrightable whole, analogous to the contest-instruction case. Another way of thinking about this – that reaches the same result – is that whatever expressive content there is in the graphics files is likely not conceptually separable from the functional aspect of the graphics, meaning that the ACD files constitute uncopyrightable subject matter by application of the functionality doctrine.

The DNS spreadsheets are potentially copyrightable, but they have the same issues as the ACD designs - expressive content is limited, and therefore the DNSs may be uncopyrightable for the same reasons. With DNSs in particular, the precedent of Feist and the accounting-forms case suggests noncopyrightability. Even if there were copyright protection, it would be extraordinarily thin – so thin as to be useless to SS. At least insofar as these facts go, the analysis for the "financial data" on the DVD would be exactly the same.

One additional note on the ACDs. If the "original sound recordings" were encoded within the graphical files – such that they are machine readable – then we have music (an expressive work) fixed in a tangible means of expression. This means that even if the ACDs themselves are not copyrightable as such, reproducing them would constitute infringement of the copyright in the sound recordings.

As a sidenote, I'll point out that the hotel did not violate the presumptively valid copyright in "Working for the Devil" by lending out the DVD. The hotel is protected by the first-sale defense. And allowing guests to view the DVD in their rooms would not count as public display anyway, so no exclusive rights were violated.

The cards:

SS has a colorable claim against GG for infringement of the 55 card by the 66 card. The 55 card, as a whole, is clearly copyrightable subject matter and therefore copyrighted. But the idea of the card is not copyrightable, nor, for instance, is the word "pull" or the industry-standard dimensions. So assuming for the moment GG copied, there is a question of
whether the appropriative similarity element of infringement can be shown. In other words, did GG copy the copyrighted work, or merely uncopyrightable elements of it? Comparing the 55 and 66 designs as a whole, a court might find substantial similarity: use of red, basically identical use of exclamation points, very similar language. But a court could well say that all that is being copied are uncopyrightable elements. To the extent that the arrangement of those elements is the same, the copied expression may be said to be driven by the central idea of the card, thus merger doctrine leaves the resulting work uncopyrightable. Alternatively, we can say that the SS's copyright is a thin one, and since the copying is not literal or near-literal, then the thin copyright affords no cause of action here. We can also use scenes-a-faire doctrine to reach the same result: Phrases such as "Get well soon!" are commonplace for the greeting-card genre and therefore cannot be monopolized with a copyright. These defenses can be unpredictable in the courts however, so the outcome is unsure. After all, the cards do present the immediate impression of looking a lot a like, and that will likely have an impact.

If there is appropriative substantial similarity, we must still ask whether there is copying. Even though GG's designers were apparently not consciously aware of the 55 card's existence, under the George Harrison case, subconscious copying is actionable. A jury could draw the inference that that is what happened here. And the case for indirect copying is strong, since there was access and the cards are probatively similar. Note that while I think the similarities are close enough for indirect proof of copying, as I explained above, I think the requisite similarity may be lacking for appropriative similarity as an element of infringement. In other words, there is similarity for evidentiary purposes, but perhaps not for substantive purposes.

I see no moral rights issues here.

SUBPART B – PATENT AND TRADE SECRET

Can GG get a patent?

When CC was able to synthesize a new kind of silane polymer that darkened in color under tension, it is likely she both had a patentable process and a patentable compound. The facts stipulate it is new, and it is clearly useful. Something is not useful merely because of aesthetics alone, but HH is useful in aesthetic applications, and that clearly counts. Certainly allowing for hiding and revealing text meets the threshold of utility. It is also seems subjectively to be nonobvious. There also seems to be no prior-art motivations or suggestions that would render this obvious to a phosita. Moreover, secondary factors also point to nonobviousness: This is an unexpected result (colors usually lighten under tension), and despite a lot of work in polymer chemistry, others have failed to achieve this result.

There is also a potential patent in the greeting card itself, with its clever means of revealing hidden text mechanically through the opening of the card. This patent, however wouldn't provide any more economic value than the patent on HH itself, unless you could get a claim that is broad enough to encompass greeting cards that do this without using HH. That seems plausible, although a very broad claim on any greeting card that has a message appear after the card is opened would likely be obvious and might not even be novel.

There would be a difference between the HH and card patents in terms of inventors: CC is the sole inventor on the HH compound/process patent, and CC and DD are co-inventors on the card. But assuming GG has standard invention assignment clauses in their employment contracts, this is a distinction without a difference.
Does HH infringe an existing patent?

111 patent: HH appears to literally infringe the 111 patent, since every element of the claim is met: it's a polymer, and it changes color when placed under tension. GG does have some good arguments against infringement, however: (1) GG can argue that the word "polymer" in the claim should be interpreted to mean organic polymers and not silane polymers. Claim language is defined by reference to the specification, and since the specification speaks only to organic polymers, it is reasonable to interpret "polymer" to be constrained in meaning accordingly. With that construction of the claim, there is no literal infringement. (2) GG can argue that if the claim embraces silane polymers, then it is overbroad – i.e., the patent claims more than was actually invented. The enablement requirement is not met because the specification does not teach how to make and use the invention to the extent of the breadth of the claim. That is, the specification does not enable a phosita to make a silane polymer that darkens under tension. (3) GG can argue the reverse doctrine of equivalents, which allows an equitable narrowing of scope even where there is literal infringement. Here there is a strong argument that HH is so different (silane, not organic) that it falls outside the equitable scope of 111.

222 patent: TT has a colorable claim against GG for infringement of 222, since HH meets the elements of the claims in that it is a silane polymer and it darkens in color when placed under a mechanical force. The key question will be how to construe "placed under mechanical force." At first blush, this would seem to include tension. But "such as compression" will inform the construction of the claim. Is tension a similar mechanical force to compression? For these purposes, there is a strong argument it is not, since the tension/darkening is unexpected and a breakthrough. To the extent GG might win on this issue, TT could come back and argue non-literal infringement under the doctrine of equivalents. This argument is weak, but, in any event, TT faces a special problem of prosecution-history estoppel in this regard. Since TT amended the claim to overcome a novelty objection, he will likely be estopped trying to use the doctrine of equivalents to broaden claim scope. In addition to these issues, the 222 patent mirrors the 111 patent with regard to claim overbreadth, enablement and reverse doctrine of equivalents – the analysis is basically the same as I provided for the 111 patent, above, in (2) and (3), except that for (3), the difference is between compression and tension rather than organic and silane.

To answer GG's particular question about TT never having manufactured, no that doesn't matter. In the U.S., the patent's right to exclude is not dependent on practicing the invention.

Also, it's worth explaining to GG that neither the 111 or 222 patents will prevent GG from patenting HH or the card. They are not relevant as prior art references. GG will get the patent on HH. The relevance of 111 and 222 go to how effectively GG will be able exploit its invention. If infringement were upheld with 111 or 222, then we would have blocking patents, and manufacture of HH or the card would require licenses both from the 111/222 patent holder and from GG.

Trade secret issues:

ACD, DNS, and the confidential financial data (FD) are potential trade secrets. ACDs and DNSs are straightforward as trade-secret subject matter - they have independent economic value that derives from their secrecy. For instance, if the squeal points were generally known, then the negotiation edge would be blunted vis-à-vis other competitors. The FD may
or may not be considered a trade secret. Probably not; the FD would still have value to SS in managing the business even if no longer secret. But courts have gone different ways on this.

Even if these items are trade-secret subject matter, they will not be valid trade secrets unless they are subject to reasonable efforts aimed at maintaining secrecy. We don't know how this information wound up in the Atomic Avalanche DVD case. It tend to lead one to believe that SS wasn't being very careful, but this could have been a error that happened despite strong safeguards generally. It's notable that the data DVD didn't have any encryption, which would have been a good safeguard. Overall, GG has a pretty good argument that there were no reasonable protections, and therefore no trade secret.

Additionally, a trade secret must actually be secret. It could be argued that once the DVD was in a lending library, it was no longer secret. That could be a close question. If no one other than VV had yet seen the DVD, there's a good argument the secret hadn't spilled at that point.

A misappropriation claim here requires that the acquisition of the trade secret be somehow improper in violation of law or ethics. Did that happen here? VV wasn't even trespassing; all he was doing was reading a disc that he picked up innocently. On the other hand, his continued exploration of it and his copying of it was not inadvertent. Also, he seemed to think he was doing something shady, since he wiped it down for fingerprints. This could indicate a transgression of accepted norms of business ethics. Arguably this is more wrongful and culpable than the conduct in the DuPont-flyover case, so there is a strong likelihood this could be considered misappropriation.

Yes, VV could go to jail under the broad scope of the federal Economic Espionage Act. But this seems like the kind of on-the-margins case that prosecutors would chose in their discretion to stay away from. It's certainly not a pre-meditated plan of industrial spying.

SUBPART C – TRADEMARK

Hylonex as a mark:

Hylonex will be protectable and registrable as a trademark. It is fanciful, so it is inherently distinctive. But GG will need to decide whether they are intending to use this word to denote themselves as a particular source of the material (in which case it may be a proper trademark) or whether they mean it to refer to any hypochromic hyperpolymer, regardless of who makes it (in which case it cannot be a trademark). In the facts, it seems to be used generically.

To the extent GG wants to claim the word as a trademark, they will have to be diligent about policing it, since people will tend toward using "hylonex" generically since "hypochromic hyperpolymer" is such a mouthful. I would advise them to go ahead and file for a federal registration now. Also I'd advise them to start capitalizing "Hylonex" and putting a superscript TM by it to make their intentions clear. If they use it generically and tolerate others doing so, the source-identification function will be lost and the putative mark will judged to be abandoned, nakedly licensed, or generic. All three doctrines get you to the same place: trademark invalidation.
XX v. GG:

GG will likely prevail. The facts don't provide any reason I see to doubt the validity of a trademark in Xylenex. It seems fanciful, and therefore inherently distinctive. But XX's infringement claim seems doomed to fail under the likelihood-of-confusion analysis. Some factors help XX: Xylenex, as a fanciful mark, is strong. Also, the words "Xylenex" and "Hylonex" are very similar; only two letters are different and they are similar sounding. But the rest of the factors are in GG's favor: Consumer purchasing care for $600-a-box space hankies will be very (very!) high. Government space programs are very sophisticated buyers. The marketing channels and customer bases are different. Also, the products are completely different – sure, Xylenex has polymers in it, but these days, what doesn't? In sum, it is very unlikely that a court will find that there is likelihood of confusion.

XX can't use dilution to sue, because Xylenex is not nationally/generally famous.

SS v. GG on the 55 card:

It is possible that the overall appearance of the 55 card could be claimed as a trademark by SS. However, the claim is dubious. The bold colors could theoretically gain secondary meaning and thus become protectable trade dress, but there's no evidence from the facts of a source association in the mind of consumers. Also, the putative trade dress appears only to be used with just one card design – the 55. Thus, it's not clear it can function as a designation of a particular commercial source of cards. SS would have a much better argument if this pattern of colors were used on a whole series of cards marketed by SS rather than just the one. Also, "PULL!" and "Get well soon!" are generic or, alternatively, they can be thought of as functional for greeting cards. And, again, these don't serve as source signifiers for SS's cards.

SUBPART D – ANYTHING ELSE

I don't see any additional issues.